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Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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WORLDWIDE REPORT

Telecommunications Policy, Research and Development

Contents

ASIA

GOVERNMENT INCENTIVE IN SPACE TECHNOLOGY URGED

Sydney THE AUSTRALIAN in English 1 Oct 84 p 8

[Editorial: "Eyes on the Ground"]

[Text] AUSTRALIA has more to gain from space technology than perhaps any other country, with its vast unpopulated, unexploited areas ideally suited to the use of communications, resource, meteorology, navigation and surveillance satellites. But, so far, Australia is one of the few countries that continues to ignore the future role of space in world economic development into the 21st century.

Other countries, such as India, the Netherlands, Canada, Japan and even our near neighbor Indonesia, have realised its commercial and strategic role and are building up viable space industries and all-important expertise, in the technology.

But Australia lags well behind, with a limited space technology capability, spread widely across many industries, and an increasing dependence on overseas technology. Even the new $300 million domestic communications satellite has provided only $5 million worth of work for local manufacturers.

It is clear that without a commitment to establishing a space industry Australia is going to become increasingly dependent on overseas technology and miss out on substantial commercial opportunities for local industry. Most importantly, it will lose control of much of the essential data required for future resource development, weather forecasting, land management and coastal surveillance.

Obviously, Australia cannot hope to build its own communications or meteorology satellite tomorrow — but with government encouragement it could build up the industrial base and expertise to allow it to provide a growing proportion of both the land and space components of the next generation of satellites. This could be done through entering into joint ventures with countries such as Japan or by becoming associated with a space organisation such as the European Space Agency (ESA) and joining in the development of remote sensing, surveillance or meteorology satellites.

With carefully focussed stimulation of our industrial capability, backed by strong scientific programs, Australia could build up a new industry able to compete on international markets and grasp substantial developing markets in the Pacific and South-East Asia.

However, space development is not cheap, and the Government would need to make a long-term multi-million-dollar commitment to the development of the industry in the anticipation of substantial returns in the next decade or beyond. Long-term planning is not a normal government activity, but without this commitment it seems certain Australia will become dependent on overseas technology, not only beyond its industrial competence, but at a cost that could escalate beyond our means to pay.

CSO: 5500/4307

BRIEFS

DARWIN TRANSMITTER REOPENED--The federal minister for communications, Mr. Duffy, has reopened Radio Australia's transmitter in Darwin to broadcast to Asia. Mr. Duffy said the government had spent more than $10 million over the past 3 years replacing and upgrading equipment which was destroyed during cyclone Tracy in December 1974. The station has now resumed broadcasting 16 hours a day to Asia after several weeks of preliminary broadcast to test equipment. [Text] [Melbourne Overseas Service in English 0430 GMT 30 Oct 84 BK]

CSO: 4200/145

BRIEFS

MICROWAVE LINK--A US$400,000 contract has been signed to install a digital microwave link across 40 miles of the Pearl River Delta from Hongkong to Macau. The Cable and Wireless Systems link, to go into operation in August, will be a 480 voice channel system designed for later expansion. It will connect New Mercury House in Wanchai with Macau's Guia Hill via a repeater at Castle Peak. The two customers are Cable and Wireless (HK) and Companhia de Telecomunicacoes de Macau. [Text] [Hong Kong SOUTH CHINA MORNING POST in English 27 Sep 84 Business News p 3]

CSO: 5540/006

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DIRECT BROADCASTING SYSTEM ACCEPTED

Jakarta SUARA KARYA in Indonesian 4 Sep 84 pp 1, 10

[Article: "Indonesia Finally Accepts and Participates in the DBS System"]

[Text] Solo (SUARA KARYA)--The Indonesian government finally accepted and will participate in the "direct broadcasting satellite" (DBS or SSL) system which already is being used by many advanced nations. This decision was taken after lengthy discussions in all limited cabinet sessions on politics and security and after due consideration of careful, in-depth studies that have been of the matter.

H. Harmoko, MENPEN [minister of information], made this announcement during a public lecture to 11th of March UNS [Nuruddin Sjahadat University] docents and students and Surakarta Municipality Kelompencapir [translation unknown] held at the Khentingan Campus last Sunday evening [2 September].

The minister was not prepared to say when use of this system would begin because its installation will require the demolition or renovation of hard and soft equipment of almost all the communications media now in this country.

In this connection, he said, there is some possibility that at least 100 TVRI [Republic of Indonesia Television] transmitters as well as receiver antennas now installed will no longer be in operation because they must be replaced with new and more modern equipment. "The old equipment could transmit 65 percent of TVRI's broadcasts," he said.

The development of communications technology in advanced industrial nations, he said, has given rise to a new culture known as the "information society." In this culture, information is considered a commodity of which there is an endless supply that can be sold or used. "It differs from natural resources which are finite in that information is self-generating and grows by leaps and bounds," Hermoko said quoting John Naisbitt, the author of the book entitled MEGATRENDS.

The speed with which information can be transmitted by advanced nations, the MENPEN admitted, could threaten the equilibrium of developing nations. Indonesia, like other nations, will not be able to stop the spillover of information. "We need not go about fanatically attempting to prevent the use of the latest technological communications advancements," he added.

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In this respect, the MENPEN said, Indonesia is not merely a spectator watching from the sidelines. "As an antidote, we have established a political party that accords with the strategic orientation of our national information system which remains committed to our national philosophy," Harmoko stated firmly.

Individual Filters

Indonesian society now is judged to be mentally resilient and interested in maintaining our native culture. For example, he mentioned the u impaired traditions of those who live at the tip of Sumatra where they now receive television broadcasts from Thailand and those in several other parts of Indonesia who receive Philippine and Singapore TV broadcasts.

"I am convinced that the DBS system will have no effect on our culture or national resilience since every individual has become able to filter out for himself the good information and to reject that which is bad," the MENPEN said.

Moreover, the MENPEN continued, it is believed that by using modern communications equipment correctly, we shall maintain a balance in the transmission of information in the future. The construction of new RRI [Republic of Indonesia Radio] broadcasting stations in a number of locations in the near future, for instance, is expected to lessen the present unequal reception of information in various parts of Indonesia. At this time it seems there is a tendency for foreign radio broadcasts to be deliberately beamed to Indonesia.

"Unfortunately much of this information must be picked up by Indonesian embassies in various countries because RRI facilities are not powerful enough to receive it," Harmoko added. It is expected that when the new 250-kW RRI stations in Cimanggis and Medan are in operation, Indonesian broadcasts can be transmitted to the Pacific region and to Europe.

6804
CSO: 5500/4302

SHORE-SEA SATELLITE COMMUNICATIONS UNDER STUDY

BK021449 Kuala Lumpur International Service in English 0800 GMT 2 Oct 84

[Text] Malaysia plans to make use of satellites for atmospheric interference-free communications between land and disaster-stricken ships in its waters. The minister of science, technology and environment, Datuk Amar Stephen Yong, announced this in Johor. He said adverse atmospheric conditions frequently hampered proper communications between ship and shore during emergencies under the conventional method of sending and receiving signals.

Datuk Amar Yong was speaking to newsmen yesterday, after lauching "Melaka '84," an exercise to combat oil spill in the Straits of Melaka off the Pontian coast, northwest of Pulau Pisang. He said the ministry was studying the matter carefully as satellite communications equipment were expensive.

The minister also suggested that all the ASEAN countries participate in joint exercises to combat oil spill in the Melaka Straits and the South China Sea. He said Brunei, the Philippines and Thailand should aluo take part in such exercises which were currently confined to Indonesia, Malaysia and Singapore.

The director general of Indonesia's Sea Communication Department, Mr Habibie, who was in Johor to witness the exercise, said Indonesia hoped to carry out a three-nation joint exercise to combat oil spills in the middle of next year.

CSO: 5500/4304

UNDERGROUND RADIO COMMUNICATION

Shanghai XIANDAI TONGXIN [COMMUNICATION TODAY] in Chinese No 8, 84 p 5

[Excerpt]   Development of Underground Radio Communications

Although work on underground communications dates back to the 1930's,
development was very slow owing to the limited technology available at
that time.   The first steps in developing very low frequency (VLF)
underwater communications were taken during World War II.   Because of
the demands imposed by geophysical investigations and the nuclear age,
the development of underground communications facilities became an urgent
problem to which the United States, Soviet Union, and other countries
devoted much manpower and resources.   During the last 20-odd years,
underground communication has undergone extensive development.

In 1959, the U.S. first announced that it was testing underground com-
munications systems as part of its rocket development program.   These
underground systems drew 30 watts of power and operated at 10 kHz by
bouncing signals off the ionosphere ("up, over and down" transmission).
The first underground radio communication link was built to connect an
underground rocket launch pad to an underground rocket control room 240
km away.   In 1960, the U.S. conducted underground radio transmission
experiments over a distance of 7 km using antennas buried 300 meters
below the surface (broadcast power 200 W, operating frequency 150 kHz).
Underground radio communications facilities were constructed during the
1960's at Hercules and Minuteman missile sites in the U.S.   In 1963-
1965 the U.S. began testing underground radio communications systems
capable of transmitting signals through rock formations; the frequencies
ranged from extremely low (a few tens of Hertz) to VHF (a few tens of
kilohertz), the antennas were buried from 150 to 600 meters below the
surface, and the signals were transmitted over distances from a few
kilometers to several tens of kilometers.   In 1976 and 1977 the U.S.
also announced the development of a specialized underground waveguide
system.

In the mid-1960's work on buried antennas began to appear in specialized
Soviet literature.   This was followed by intensive research and testing,
and conferences of underground radio communications specialists were
held.

Since the 1950's China has also been engaged in the development and testing of underground radio facilities. Preliminary progress in research and testing of low- and very-low-frequency underground communications has been made in recent years.

Underground radio systems have now entered the stage of practical implementation. For example, in the United States an underground military command center has been built at the North American Air Defense Headquarters in the Cheyenne Mountains. Its location 500 meters underground in granite caves ensures hardening against a surprise nuclear attack, and communication with the outside world is via rock-penetrating underground communication links. It was disclosed at the beginning of 1979 that the Soviet Union had begun constructing an extremely low-frequency underground radio submarine command system, and work has been in progress for roughly 2 years. This system contains a vast array of radio equipment which is buried underground and employes "up, over and down" transmission to send instructions to submarines.

In summary, all existing underground radio stations depend on the propagation of radio waves through layers of earth. Nevertheless, some specialists in long-range military communications believe that neutrino beams might provide a method for overcoming the difficulties associated with underground radio communications. Perhaps by that time, underground radio communication will be as simple and convenient as surface air-wave transmission.

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CSO: 5500/4130

TRENDS IN TACTICAL RADIO EQUIPMENT

Shanghai XIANDAI TONGXIN [COMMUNICATIONS TODAY] in Chinese No 8, 1984
pp 1, 20

[Article by Zheng Zuhui [6774 4371 6540]]

[Text] Radio communication is one of the most important means of getting
instructions to troops during wartime. Since message transmission over
wire circuits is easily disrupted by enemy bombs, wireless communication
is of critical importance to belligerents. Some of the technologically
more advanced nations are devoting much new technology and equipment to
continually improve the capabilities and performance of their military
radio facilities. The number of installations has also risen dramatically,
and some countries even provide ordinary soldiers with radio transceivers
(e.g., steel helmets).

Modern trends in tactical radio equipment emphasize solid-state, digital,
automatic equipment which is highly reliable, permits encryption, and
is not susceptible to interference. Some countries have built regional
communications systems based on radio transceivers. In what follows we
will discuss current developments as they relate to tactical transceivers,
so that our discussion will be biased toward ultrashort-wave (USW)
military radio equipment.

1. Digital Frequency Syntaesis, Wider More Closely Spaced Frequency
Bands, More Channels

Frequency synthesizers have long been employed as signal sources in radio
transceivers as replacements for the older LC and polycrystal oscillators.
With the advent of digital frequency synthesizers it has become possible
to increase the bandwidths and reduce the intervals separating different
bands. For example, modern shortwave transceivers now operate at between
w and 30 MHz (in some cases, from 1.5 to 30 MHz), while USW transceivers
commonly range from 30 to 80 (or 88) MHz. Multipurpose broadband trans-
ceivers have been developed and deployed for coordinating the activities
of soldiers in the field. For example, the United States has developed
the AN/PRC-70 radio transceiver for frequencies 2-76 MHz; this system
can be used for conversation, continuous-wave broadcasting and frequency
shift keying in the AM, FM, or single-sideband modulation modes. The AN/
PRC-70 was followed by the mobile AN/URC-94(V) (RF-280) unit which
operates at 1.5-80 MHz and is now being deployed.

As the frequency bands have become wider, the intervals separating them have shrunk. The spacing between shortwave bands is now generally just 100 Hz, making it possible to accommodate 280,000 fixed channels in the 2-30 MHZ range which do not require tuning. Similarly, the USW channel separation has decreased to 25 kHz (or even to as little as 12.5 kHz in some cases), permitting some 2,000 fixed channels in the 30-80 MHz band. The larger number of channels has simplified the design of communications equipment (such as frequency allocators) and made it easier to coordinate communications systems.

2. Improved Interference Immunity

Because of the important military applications of electronics, many nations have built facilities for jamming signals from hostile parties. Two methods are currently available for combatting interference. 1) "Frequency-jumping," in which the frequency is rapidly changed in a pseudorandom sequence during pre-assigned time intervals. The changes are so rapid that the enemy cannot reconstruct the signal frequency fast enough to identify and intercept the signal. 2) Alternatively, one can use a linear sequence with a greatly expanded signal frequency spectrum. The energy of the resulting signal within a normal band is so low that the signal if masked by noise and therefore difficult to detect and intercept. Of these two methods, the former is the one generally employed in tactical radio. There are three types of frequency jumping: slow, intermediate, and fast, which correspond to < 100 jps (jumps per second), 100 - 1,000 jps, and >1,000 jps. Both the slow and the 100 and 200 jps intermediate versions are used. Examples include the SCIMITAR-V system manufactured by Marconi Corp., Great Britain, and the JAGUAR-V made by Laker Corp., USA, both of which employ intermediate frequency jumping. The implementation of frequency jumping was a crucial technical advance in tactical communications, and its future prospects are bright.

3. Microprocessor Technology

Since microprocessors can perform control, data acquisition, and data processing functions, they can be used in slower units where fast processing is not required; in this case, system properties can be altered by software without any need to modify the hardware. Microprocessors are widely employed in tactical radio systems outside China for presetting and storing frequencies, data processing, wireless remote control, remote measurements, automatic tuning, frequency-jumping code generation, signal decoding, and in key-generating "guns" used to generate and enter cryptographic keys. The performance of radio transceivers is being steadily improved through the use of microprocessor technology, and microprocessors have become one of the most important components of modern radio systems.

4. Replacement of Analog by Digital Components, Wide Use of Encryption
Devices

The many advantages of digital communication include greater immunity to
interference, amenability to encryption, high information content, and
ease of multichannel communication. The first features are of great
significance for tactical radio since air-borne signal traffic is heavy
during wartime and susceptible to random noise ("headphone static"),
interference from atmospheric disturbances, surges in the industrial
power supply, and other distortions, all of which are superimposed
on the radio signal amplitudes and degrade signal quality. By contrast,
digital transmissions are represented as binary signal pulses corresponding
to "0" and "1"; the information in the message is conveyed not by the
signal amplitude but by the sequence of 0's and 1's. It is thus possible
to restore the integrity (sequence) of the signal even after amplitude
distortion and thereby keep interference from degrading singal quality.
Digital also lends itself to encryption. Moreover, reliability and
information content are both improved because microprocessors can handle
data in digital form directly. Because of these advantages digital
tactical radio systems are now in wide use.

Low-power, large-scale-integrated (LSI) circuits and microprocessors
have become commonplace during the past few years. This has been reflected
in great improvements in radio. For instance, the encoding schemes now
have much longer periods, and there has been a proliferation of crypto-
graphic keys (the keys needed to crack encoded radio signals at the
division or batallion level now range from 10^{10} to 10^{50} in numerical
value). Special "guns" are now used to enter or change cryptographic
keys; such a gun can transmit its key to another point in the network
to permit encoded conversations. In order to keep this process from being
detected, some devices may be given individual keys for use in addition
to those provided by a master generator. The loss of keys if a station
is destroyed can be minimized by taking suitable measures to protect
the encryptors.

Encryption devices come in two types, digital and analog, but since
shortwave stations are narrow frequency bands only analog encryption is
employed today. However, narrow-band digital encryption using vocoder
or semivocoder techniques is becoming feasible; although these methods
are complicated, further hardware improvements should make them attractive
in the future. Digital encryption is always employed for USW communica-
tions; in this case the voice signal is modulated, digitized, and then
scrambled (the original signal sequence is restored upon reception at
the other end).

5. Greater Functionality, More Automatic Features

Microprocessors are gradually improving the performance of tactical radio
systems. We cite four examples: 1) the BITE automatic tester for trouble-
shooting hardware problems in radio systems. If a malfunction is detected,
the corresponding module can be easily replaced. The BITE tester can

also be used to record the main characteristics of signal receivers and transmitters. 2) Devices are available for presetting and storing frequencies, so that manual tuning is unnecessary. The required basic and instrument frequencies can be stored simultaneously and then recalled for use simply by pressing a preselected pushbutton. Up to 8 or 10 frequencies can be stored simultaneously in some systems. 3) Radio hardware is now equipped with remote-control capabilities which permit operators to turn dials and manipulate switches on the front panel of the instrument over distances of 2-3 km. This improves safety under combat conditions because equipment in the field can be operated by troops under protective cover. 4) Shortwave radios can be tuned automatically and quickly in a few seconds to as little as a few tenths of a second. Cumbersome manual tuning is thus unnecessary.

Of course, many other features such as user call selectability, ability to independently interrupt and participate in telephone conversations, etc., can also be added.

6. Versatile, Modular, Integrated Solid-State Components are Drastically Reducing the Size and Weight of Radio Systems

The development of integrated solid-state devices and modular designs have made it possible to miniaturize and standardize radio equipment while increasing functionality. For example, the dozens of components formerly required in FM receivers can now be replaced by a single integrated module less than 2 cm^2 in area.

The integrated solid-state circuitry has also reduced the rate of hardware failures--the mean time between failures (MTBF) in tactical radio equipment has increased from 10 - 100 h to thousands of hours, and the mean time to repair (MTTR) is only a few minutes or tens of minutes.

The above discussion is just a brief introduction to present trends in tactical radio equipment. As electronic technology continues to advance, we anticipate that the increases in the number and quality of radio devices will be sufficient to meet future military requirements.

12617
CSO: 5500/4130

TELECOMMUNICATIONS BEING IMPROVED IN OPEN CITIES

OW060685 Beijing XINHUA Domestic Service in Chinese 1240 GMT 5 Nov 84

[By reporters Huang Fengchu and Yang Like]

[Text] Beijing, 5 Nov (XINHUA)--After the central authorities made a decision in April this year to open 14 additional coastal cities to the outside world, the Ministry of Posts and Telecommunications promptly decided to support such open cities and special economic zones by building telecommunications facilities for them. The ministry has so far adopted four measures and achieved good results in this regard. The four measures adopted by the ministry are:

Assistance is being given to the open coastal cities to install advanced, program-controlled digital telephone systems, which will be completed by the end of 1986. The installation of an automatic telephone system in Fuzhou City has been completed, and is expected to be completed in Xiamen City by the end of this year, in Shanghai, Guangzhou, Shenzhen, and eight other cities next year, and in Zhuhai, Beihai, and four other cities in 1986.

The long-distance telephone systems in the four cities of Tianjin, Shanghai, Fuzhou, and Zhuhai have been automated. It will be possible to dial long-distance calls in Guangzhou, Xiamen, and Shenzhen by the end of this year. The installation of program-controlled exchanges in Dalian, Qinhuangdao, Yantai, and Qingdao is being sped up in order to make it possible to dial long-distance calls by the end of 1986. Efforts are being made to increase semi-automatic, long-distance communication facilities, long-distance telephone lines, semi-dialing telephones, and manual long-distance communication facilities in other cities to cut the waiting time considerably for telephone subscribers.

Telex services will be available in special economic zones and open cities by the end of next year. Then, telex subscribers will be able to send telegrams to various parts of the country and the world from their offices. The post and telecommunications departments in Guangzhou, Shenzhen, Shanghai, and seven other cities have opened telex services, with a total of 2,422 circuits.

The building of major cable and microwave communication projects to be connected with special economic zones and open coastal cities is being accelerated. The 1,800-circuit Beijing-Wuhan-Guangzhou coaxial cable project, the second such project in our country, is expected to be completed ahead of time by the end of 1985. At the same time, efforts are being made to complete the Nanjing-Shanghai, Shantou-Xiamen, Shenyang-Dalian, Shanghai-Hangzhou, and Jinan-Qingdao minor coaxial cable and microwave communication projects, each with 300 to 900 circuits, in 1985. Preparations are also being made to build the Nanning-Beihai, Xuzhou-Lianyuangang, and Haikou-Sanya microwave communication projects, which will be available to the users by the end of 1985 according to plan.

CSO: 5500/4151

YANG TAIFANG OPENS TELECOMMUNICATIONS EXHIBIT

OW061411 Beijing XINHUA in English 1309 GMT 6 Nov 84

[Text] Beijing, November 6 (XINHUA) -- More than (?181) companies from 15 countries are taking part in an exhibition which opened here today to show their sophisticated telecommunications equipment, computers and electronic devices and appliances. The exhibition was organized by the Cahners Exposition Group Co, of the United States.

The participating companies came from Australia, Belgium, Brazil, Canada, Finland, France, Federal Germany, Italy, Japan, Norway, Singapore, Snain, Sweden, the United Kingdom, the United States and Hong Kong. During the exhibiti n, the participating companies will hold seminars on 60 subjects.

A spokesman for the China Council For the Promotion of International Trade, the host organization, told XINHUA that this is the largest exhibition of its kind ever held in China. The exhibition covers more than 11,000 square meters of floor space.

Ned Krause, vice-president of Cahners, said at the opening ceremony that a great deal of effort had gone into introducing leading companies and their products from all over the world to end users in China with a view to contribute to China's economic growth and [words indistinct] our company strongly believes in the economic future of China and will (?demonstrate) [word indistinct] and technology and to help meet China's requirements in the future," he added.

Yang Taifang, minister of posts and telecommunications, cut the ribbon at the opening ceremony. Chairman of the China Council for the Promotion of International Trade Wang Yaotang and representatives from government departments attended. The exhibition will close November 13.

CSO: 5500/4150

PRC TO STEP UP TELECOMMUNICATIONS IN OPEN CITIES

OW071218 Beijing XINHUA in English 1152 GMT 7 Nov 84

[Text] Beijing, 7 Nov (XINHUA)--All the 14 open port cities and the special economic zones in China will automate their telephone services and have telexes in the near future, according to the Ministry of Posts and Telecommunications.

A plan worked out by the ministry calls for steps to enable all the open port cities to have program-controlled digital switching systems by the end of 1986.

Such a system has already been put into service in Fuzhou, capital of Fujian Province. Imported from Japan, the system has 10,000 local telephone lines, 500 toll trunk lines and a computer billing system. The one in Xiamen is scheduled for completion by the end of this year.

Steps are being taken to automate or partially automate the STD systems in Dalian, Qinhuangdao, Yantai and Qingdao to boost their long distance call capacity.

By the end of 1985, all the special economic zones and open port cities will be served by telexes.

In addition, construction of cables and trunk microwave telecommunications projects will be accelerated. A 1,800-channel co-axial cable linking Beijing, Wuhan and Guangzhou is expected to be completed by the end of 1985, ahead of schedule.

Plans are being made to build five 300 to 900 channel co-axial cable and microwave communications projects from Nanjing to Shanghai, from Shantou to Xiamen, from Shenyang to Dalian, from Shanghai to Hangzhou and from Jinan to Qingdao. The Nanning-Beihai, Xuzhou-Lianyungang, and Haikou-Sanya microwave communications projects will also be built.

CSO: 5500/4154

NINGXIA TELECOMMUNICATIONS NETWORK UPGRADED

OW110200 Beijing XINHUA in English 0825 GMT 11 Nov 84

[Text] Yinchuan, 11 Nov (XINHUA)--The once secluded Ningxia Hui Autonomous Region has set up a complete posts and telecommunications network.

According to regional posts and telecommunications authorities, the region has telephone exchanges with 11,890 lines in cities and 2,930 rural lines. Long distance dialing telephone calls can reach 22 other provinces, cities and autonomous regions.

A microwave telecommunication trunk line has been built to undertake transmission of telephone calls, television broadcasting and fascimiles.

Ningxia is the smallest provincial-level autonomous region in China. Before new China was founded, there were only some 100 telephone lines installed in governmental organizations. Postmen had to go on foot or on donkey back in delivering letters and parcels.

Now the region has 186 post offices, with postal routes totalling over 16,000 kilometers as against 1,900 kilometers in 1958.

The regional posts and telecommunications authorities said that 20.71 million yuan have been invested in posts and telecommunications project between 1978 and 1984 and more have been planned for 1985. In addition, six more microwave circuits will be added linking the regional capital of Yinchuan with Beijing, and a programmed controlled city telephone exchange will be installed in the regional capital, the authorities said.

CSO: 5500/4154

BRIEFS

PROGRAM CONTROL TELEPHONE EXCHANGE--Beijing, 8 Nov (XINHUA)--Beijing's first program-control telephone exchange, with equipment imported from Ericsson of Sweden, went into operation at an opening ceremony here today. The exchange, in the northeast of the city, mainly serves the Beijing, Great Wall, Jianguo and Beijing-Toronto Hotels. It will expand its capacity from the present 7,500 telephone lines to 30,000. Beijing plans to install 100,000 program-control telephone lines by 1990. Between 1979 and 1983, Beijing spent 160 million yuan (about 60 million U.S. dollars) on building and expanding 26 telephone exchanges, of which 11 are now complete. The city now has 340,000 telephone sets. Today's ceremony was attended by Vice-Mayor Zhang Baifa, Vice-minister of Posts and Telecommunications Zhu Gaogeng and Swedish Ambassador to China Lars Bergquist. [Text] [Beijing XINHUA in English 1034 GMT 8 Nov 84 OW]

NEIMONGGOL MICROWAVE CIRCUIT--A modern radio and TV microwave circuit between Hohhot and Saihan Tal in Nei Monggol Autonomous Region was formally put into operation on 16 October. The microwave circuit is 227.4 km in length. [Summary] [Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 17 Oct 84 SK]

SINO-ITALIAN FACSIMILE TRANSMISSION--[By reporter Huang Changrui] Rome, 6 Nov (XINHUA)--Italy and China successfully experimented with facsimile transmission today via the Italian satellite "Sirius No 1." The front pages of RENMIN RIBAO and the English-language paper CHINA DAILY published in Beijing today were transmitted here via satellite. Both the picutres and the words transmitted were very clearly received. The "Sirius No 1" is an Italian experimental communications satellite launched by the United States in 1977. The scientific and technological personnel of Italy and China began joint scientific experiments via the satellite on 15 June 1983. President Li Xiannian talked with the Italian President Pertini via satellite for 15 minutes in July 1983. [Excerpt] [Beijing XINHUA Domestic Service in Chinese 1212 GMT 7 Nov 84 OW]

XIZANG PREFECTURAL TV STATION--Following the completion of the construction of a television station, Ali Prefecture succeeded on the night of 22 October in its trial broadcast. The picture was sharp and the sound accompaniment was loud and clear. In the course of construction, the regional radio and television department and the (Nanjiang) Petroleum Headquarters gave great support to the project. In the stage of installing and readjusting the equipment, the television station of (Nanjing) Petroleum Headquarters sent an engineer and technicians to (Shiquanhe) to help the Ali Prefecture Television Station readjust the equipment and train maintenance staff. The regional radio and television department also sent staff to train operators of closed circuit television for various counties. Presently, every county in Ali Prefecture owns a closed circuit television system. [Summary] [Lhasa Xizang Regional Service in Mandarin 1130 GMT 29 Oct 84 HK]

SHANDONG SUBMARINE CABLE--A 46.5-km long coaxial submarine cable from Shandong Province's Penglai County to Changdao County's Tuoji Island of the same province was completed on 4 September. The new cable line was connected to another coaxial submarine cable from Dalian, Liaoning, Province, to Tuoji Island which was completed in 1981 to provide direct submarine cable communications between Shandong and Liaoning. [Summary] [Beijing XINHUA Domestic Service in Chinese 1303 GMT 5 Sep 84 OW]

RADIO, TV WORK DISCUSSED--The 14 coastal cities opened to the outside world held their first meeting on radio and television cooperation in Zhejiang's Ningbo City today. More than 50 representatives from the 14 coastal cities, the Ministry of Radio and Television and the (?National Radio and Television Association) attended the meeting. The meeting's main purpose was to exchange experience on reforming news broadcasts and to improve radio and television program in general. Responsible comrades of Ningbo's relevant departments briefed the participants on their work since the city's opening to the outside world and on the city's future plans. [Text] [Hangzhou Zhejiang Provincial Service in Mandarin 1000 GMT 26 Oct 84 OW]

CSO: 5500/4149

BRIEFS

SATELLITE TERMINAL--According to a report in the paper TUAN TIN TUC, the Soviet state has decided to help us build the Hoa Sen-2 [Lotus] satellite ground station in Ho Chi Minh City. The Hoa Sen-2 station will directly speed up and improve telegraphic, telephone and television communications and the reception and transmission of news and radiophotos in the southern provinces. The station will be built on the former site of the Mac Dinh Chi cemetery in the 1st precinct, Ho Chi Minh city. The Hoa Sen-2 station, expected to be commissioned on the occasion of the city's 10th liberation anniversary at the same time as a teenagers' cultural palace which will also be built here, will be a beautiful, modern construction project gracing Ho Chi Minh city's northern gateway. [Text] [Hanoi Domestic Service in Vietnamese 0500 GMT 28 Oct 84 BK]

GROUND SATELLITE STATION--Hanoi, VNA, 7 Nov--Activities were recently held in various localities in Vietnam, marking the 67th anniversary of the Great October Socialist Revolution. Vietnamese young people and Soviet specialists working on the construction site of the Hoa Binh hydro-electric power plant, west of Hanoi, engaged in a Communist working day on November 4. They also held a teach-in on the October revolution and the Soviet land and people. A talk on the USSR and the socialist community's struggle for peace and disarmament was held in Ho Chi Minh City on November 3 by the Ho Chi Minh City branch of the Vietnam-USSR Friendship Association. Also in Ho Chi Minh City, the construction of the second ground satellite station was started with the Soviet assistance and a week of Soviet films was opened. [Text] [Hanoi VNA in English 0727 GMT 7 Nov 84]

CSO: 5500/4306

TALKING COMPUTER SOLD TO U.S. FIRM

Montreal LE DEVOIR in French 27 Sep 84 p 20

[Article by Andre Bouthillier]

[Text] Bell-Northern Research Laboratories and INRS-Telecommunications have just sold to the U.S. company Digital Equipment the right to use their software package, which is capable of producing voiced texts for a computer of any material printed in French or English.

This was disclosed to LE DEVOIR yesterday by Douglas O'Shaughnessy, an INRS-Telecommunications researcher.

The two Ile-des-Soeurs partners will use the proceeds resulting from the agreement to improve the software package and develop a program capable of not only talking but also of recognizing words.

For its part, Digital Equipment, a large manufacturer of computers and synthesizers, will try to find wider commercial applications for the "text reader" computer.

O'Shaughnessy explained that Bell-Northern and INRS-Telecommunications did not intend to jump into the commercial market immediately because the success of such an operation cannot yet be assured. "For the moment, the market for the talking computer is still too limited. Our device does not address itself to use by several categories of consumers," he noted.

Bell-Northern and INRS-Telecommunications have developed a "word synthesizer" which can reproduce voiced texts of any message sent to it through a micro-computer terminal. An optical reader scans the text and the computer interprets, transforming the words into sounds. Then, the computer synthesizes the spoken word, i.e., it produces the "real word signal."

The machine accomplishes this with good intonation and operates at a maximum speed of 200 words a minute. All the directions pertaining to the word are stored in the software. The synthesizer therefore can translate into sounds any message at all without any limitation on vocabulary.

The "text reader" emerged from the laboratories some months ago. It can be very useful for the visually impaired or for businessmen who need to communicate by telephone with data banks. But the list of commercial applications stops there. For the moment.

According to O'Shaughnessy, the applications could multiply once the research technicians have succeeded in developing a talking computer capable of listening to, recognizing and distinguishing the voice as well. "In 8 or 10 years," he hopes. The most pessimistic (or realistic?) observers say, wait till the 21st century...

A 25-year-old Frenchwoman, Mrs Martine Kempf, has just raised hopes by commercializing a verbal command system that allows a handicapped person to operate a wheel chair, open the door of his car or make a telephone call without dialing the number. However, to accomplish these things, her software needs to store only such words as "left," "right," "open," "close"...

"In our Ile-de-Soeurs laboratories, we have developed a software package capable of understanding only about 20 words. But this program recognizes only the voice of a person who has previously been trained with it," O'Shaughnessy explained.

If the computer could recognize the human voice, the typewriting of texts would become obsolete; if it could distinguish one person's voice from another's, it would result in improved control of access to information generated by a computer or in carrying out automatic transactions by telephone...

In order to do this, it would have to take into account the pronunciation and accent of each of its human interlocutors and understand a phrase quickly in order to respond quickly in the following seconds. "We do not yet really know the limits of artificial intelligence. Therefore there is hope," O'Shaughnessy concluded.

Bell-Northern Research is a subsidiary of Bell Canada Enterprises (30 percent) and Northern Telecom (70 percent). In 1971, together with the National Institute for Scientific Research (affiliated with the University of Quebec), it created INRS-Telecommunications to carry out research and development in the field of telecommunications systems engineering.

Bell-Northern and INRS-Telecommunications share the same building on the Ile-des-Soeurs. They are responsible for the Bell-Northern Research French-speaking computer project. The English-speaking computer project is being carried out in the Bell Northern Research laboratories in the Ottawa region.

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CSO: 5500/2508

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FIXED SATELLITE PLANNED BY ANDEAN GROUP

PA012313 Bogota EL SIGLO in Spanish 27 Oct 84 pp 1, 3

[Article by Guillermo Tovar A.]

[Text] Yesterday, Colombian Communications Minister Nohemi Sanin Posada announced that Colombia will launch a fixed--that is, rotating at the same speed as the earth--satellite for the Andean Group.

In addition, Colombia will create what is to be known as the National Data Transmitting Network [Red Nacional de Transmision de Datos].

The minister and National Enterprise for Telecommunications [Telecom] President Hernan Gonzalez Sorzano presented to the leaders of the telecommunications sector and advertisers associations a draft for an agreement with the government to learn the requirements of the private sector before deciding whether such a costly investment can be justified.

The minister said that the satellite will affect the activities of enterprises and Colombians and added that first of all the satellite must meet our needs for the next 10 years, the estimated life span of each system.

According to studies conducted by Telecom and French experts, the most profitable model would be a joint venture that Colombia would launch, not only for transmission of television, telephone communications, and national data, but to meet the needs of Ecuador, Peru, Bolivia, and Venezuela. These countries would then share the cost of the project.

The initiative, presented by the late Foreign Minister Indalecio Lievano Aguirre years ago takes advantage of Colombia's strip of territory on the equator. Such a location gives some countries special advantage for launching a fixed satellite.

Two other projects under consideration are a Colombia satellite project known as Satcol and the direct contracting for services through the international enterprise, Intelsat.

These two projects were discarded until now because Telecom could not afford the huge costs. At any rate, however, Intelsal would be in charge of handling the project, while NASA of the United States would be in charge of launching the satellite.

The system consists of a fixed booster station that allows for easy access and transmission of telex, telephone, computers, and national education communications, as well as national and international television broadcasts. The Andean satellite would have 24 transponders [transmitter-receiver units with distance-measuring equipment], each of which can handle 1,000 telephone channels.

The president said that Colombia should take advantage, as soon as possible, of three orbital positions that the country has registered at the International Telecommunications Union. These positions may be used until 1988. The official also announced that Colombia will convene a meeting of Andean countries by the end of this year in order to formalize the proposal. He also said that the National Council for Economic and Social Policy would approve the project only if it is profitable.

Furthermore, the minister announced the initiation of the National Data Transmitting Network in order to make known governmental information to all levels.

It has been planned to reach with this wealth of information homes and distant places through a computer. Systems such as videotex, teletext, and electronic courier will be installed. These systems permit data transmission, display, and reception at a speed 50 times faster than telex.

CSO: 5500/2011

BRIEFS

DIRECT DIALING SERVICE--Silvania, a city between Bogota and Girardot, in Cundinamarca Department, has been linked to the national direct telephone dialing service. The announcement was made by the press office of the National Enterprise for Telecommunications, which said that a new telephone central office with a maximum capacity of 150 lines has been installed in Silvania. [Summary] [Bogota Domestic Service in Spanish 1730 GMT 24 Oct 84 PA]

CSO: 5500/2011

RADIO MARTI SAID TO FURTHER 'POISON' BILATERAL RELATIONS

Havana PRISMA, latin american focus in English Sep 84 pp 22-23

[Article by Martin Hachtoun and Noll Scott]

[Text] ▽ Soon after becoming president of the United States, Ronald Reagan assured the world that communism would one day be "consigned to the trashcan of history". It is interesting to look back and see how much progress has been made in this direction, especially here in what he likes to call "America's backyard".

But first, what does he mean by communism, what does he mean by history, and above all, what does he mean by trashcan?

In El Salvador, obviously the communists are the defenceless workers and peasants whose mutilated bodies are left festering by the roadside each night. The word trashcan can be taken fairly literally.

In Grenada on the other hand, the island's leaders had already pressed the self-destruct button on their people's revolution. Fidel Castro's epitaph was: the United States "murdered a corpse and revived a symbol".

In Nicaragua, all protestations of pluralist democracy are cast aside as the US again perceives "communism" and tries to turn it rotten, hoping others may do the dirty work of throwing it into the trashcan of history.

Yet regarding Cuba, the one country in the region that openly professes communism, the Reagan administration, despite more than three years of sabre-rattling, has not yet even managed to deliver its election promise of a medium-wave radio station to "tell Cubans the truth about their island". Is it possible that this project has itself been "consigned to the trashcan of history"?

The answer may not be long in coming, for after two earlier false starts, the US government has now promised that the notorious *Radio Marti* will finally come on the air this September. Its timing could not be more blatantly geared to Reagan's re-election programme.

▷ SANTA FE DOCUMENT

The origins of the station date back to Reagan's 1980 presidential campaign when Roger Fontaine of the Georgetown Centre on Strategic and International Affairs (later to become Undersecretary for Inter-American Afairs) was appointed to draft the Santa Fe Document, a major plank in Reagan's campaign platform.

Under Fontaine's leadership the Santa Fe committee —involving such right wing luminaries as Jeanne Kirkpatrick, today the US ambassador to the United Nations— decided to include proposals for a "legal transmitter" directed specifically towards Cuba.

The word "legal" was far from accidental. Ever since the 1959 Cuban revolution a plethora of pirate stations has operated on the 41 metre shortwave band under names such as *Voice of Independent Democratic Cuba, Christian Voice of Cuba, Progressive Youth of Cuba, Voice of Alpha 66* (a Los Angeles-based group of anti-Cuban terrorists), *Radio Cuba Libre, WOBA Cubanisima*, and the most recent *Voz del Cid* beaming from the Dominican Republic.

The only Spanish language transmissions with a significant audience are not targeted exclusively at Cuba. They come from the US government's own *Voice of America (VOA)* which has heavily discredited itself over the years by its weakness for obvious lies.

There are two significant points about *Radio Marti* as the proposed new outfit came to be called. The first is its name: José Martí is the island's national hero who died fighting the Spaniards in 1895. It is like beaming propaganda into Nicaragua under the name of Augusto César

Sandino, into Vietnam under the name of Ho Chi Minh, or even —a reprisal the Cubans themselves toyed with— into the United States under the name of Abraham Lincoln.

Just as aggressively, *Radio Marti* is to be a *medium wave* station using brand-new transmitters now installed on Key Saddlebench 90 miles from Havana. Unlike shortwave, which is mainly used by enthusiasts and the military to pick up long-range signals, medium wave is the bread and butter of the radio business, used by 800 commercial stations in the US alone. The decision to use its frequencies for "foreign policy" purposes immediately alarmed the powerful US radio-owners, who felt their interests directly threatened.

"If direct transmissions were made from the United States to Cuba, we reserved the right to make direct transmissions to the United States... The aim would not be to interfere (with US domestic stations, although) it could be that some station might suffer interference," Cuban president Fidel Castro told US journalists recently in Havana.

"We have been prepared to discuss the question of interferences; but what has blocked a solution to this problem is precisely the proposal to establish this radio station. This radio station has been announced many times, for different dates, but still it has not come on the air. You ask what we are going to do, and I say there's no hurry, there's no reason to cross the bridge before you get to the river."

Despite the US radio owners' trepidation that the already crowded medium waveband could become even more chaotic as a result of the Reagan administration's actions, the White House pressed on regardless and on January 19, 1982 appointed a special presidential committee for the *Radio Marti* project with 11 members led by F Clifton White, a longstanding rightwinger who was Barry Goldwater's 1964 presidential campaign manager.

His deputy was Richard B Stone, Florida senator and later Reagan's roving ambassador to Central America. Committee secretary was Jorge Luis Mas, a prominent Cuban exile and chairman of the Miami engineering firm *Church and Tower.*

The other members were all business leaders and Republican right wingers, including Richard Scaife, a multimillionaire newspaper magnate who became owner in 1975 of the now-discredited CIA-backed *Forum World Features* news agency; Joseph "Moral Majority" Coors, co-founder with Scaife of a strategic research centre called the *Heritage Foundation* and a member of Reagan's kitchen

cabinet, and Charles Wick, head of the government's *Information Agency (USIA)* whose empire includes the *VOA* itself

▷ DOUBTS IN CONGRESS

With such enemies, who needs friends? Cuba does, for one, and the•East Coast establishment of the *New York Times, Wall Street Journal* and *Washington Post* condemned the project as provocative nonsense. However the White House, undeterred by the liberal "pinkos", duly presented Congress with a request for US$10 million to build the transmitter in Key Saddlebench and to improve other existing *VOA* facilities in the Caribbean.

It looked for some time as if *Radio Marti* might not survive a bumpy passage through Congress and its numerous committees. There were a handful who argued that the new station would be an interference in the internal affairs of another country. But it was mainly the radio lobby that succeeded in baulking the project. "Keep politics off the medium waveband," they cried.

And so it remained until September last year when South Korean airliner *KAL 007* was shot down over the Soviet Far East while on a CIA spy mission. Within a week legislation miraculously passed through both houses of Congress allocating US$14 million for 1984 and US$11 million for 1985. Radio Marti seemed to be home and dry.

However by this time it had been determined that Radio Marti should belong within rather than outside the tainted umbrella of the *VOA.* In the same bill Congress also granted US$54.8 million to modernise existing *VOA* facilities, to be matched by the same sum in 1985. The campaign for *Radio Marti* was crucial in winning this extra funding for the *VOA.* But now the original project was beginning to seem small beer in comparison.

It faced, moreover, severe editorial problems. If it was going to tell Cubans the "truth about their island" then where was that "truth" going to come from? There are no US reporters in Cuba and the CIA network has been so thoroughly shattered that it could not possibly provide the appropriate "dirt". Yet credibility within Cuba, sufficient at least to cast doubt on the government's version of events, was absolutely central to the whole scheme.

President Reagan was too busy playing to the gallery of Hispanic voters to worry about such trifles. In a bizarre address to "the people of Cuba" on January 28 this year, the 131st anniversary of José Martí's birth, he pompously announced

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that the radio would start broadcasts "in the Spring". Spring came and went, but *Radio Marti* still did not appear.

Despite *Radio Marti's* prolonged silence, however, the *VOA* has stengthened the power and range of its broadcasts in the Caribbean basin by leaps and bounds during Reagan's presidency, including the installation of relay transmitters in the British colonies of Turks and Caicos, just north of Cuba, and the Cayman Islands, just to the south.

In September 1981 a US magazine, *World Broadcast News*, reported that a further *VOA* transmitter had been installed on another British colony, Antigua (which became independent in November 1981). This turned out to be a highly directional broadcasting post bearing straight at Grenada.

The man responsible for US government communications in the eastern Caribbean, Ashley Wills, also first secretary at the US embassy in Barbados, was on board the *Guam* aircraft carrier last October as the US invaded Grenada, to witness the denouement to his ideological "softening up" efforts of the previous months, to which Britain had rendered such sterling assistance.

During virtually the whole of Reagan's presidency, the *Radio Marti* project has acted mainly as a vehicle for expanding US propaganda broadcasting throughout the region as a whole. An apparently anti-Cuban and anticommunist campaign has thus worked chiefly as an agent of US hegemony over third countries.

The fact that *Radio Marti* is now scheduled to appear —finally— at the height of the presidential election campaign, highlights the other major target of the project: for from seeking to win the "hearts and minds" of Cubans Reagan is aiming opportunistically for votes among the Hispanic communities of right-wing Latin exiles.

If *Radio Marti* does indeed emerge, it can be guaranteed a large and attentive audience for the first few days, but no one seriously fears it will win Reaganism any Cuban converts. The most serious consequence will be the accelerated trade in charge and countercharge across the Florida Straits, further poisoning the bitter atmosphere between the two neighbours.

It would be wrong to suppose that because Cuba has so far been spared this malicious and insulting presence the project will never materialise. Like the long-expected US invasion of Central America it remains as much on the cards as ever. And while Washington's internal political tussle ebbs and flows, the logistic build-up goes remorselessly on. **Δ**

MINISTER TELLS TELEPHONE EXPANSION PLANS

Madras THE HINDU in English 5 Oct 84 p 12

[Text] Madras, Oct. 4. Mr. V. N. Gadgil, Union Minister of State for Communications, said here today his Ministry had sought an allocation of Rs. 12,500 crores for its projects in the Seventh Plan.

The projects would vastly improve the telecommunication system by 1990, he assured and said the goal was to take the telephone to every nook and corner of the country so that one would reach it in five km. Prominence had been given to telecommunication in the approach paper on the Seventh Plan.

Mr. Gadgil was inaugurating the Rs. 12-crore Nungambakkam electronic telephone exchange, first of its kind in South India, at a function at Kalaivanar Arangam. The inaugural call made by him to the Tamil Nadu Electricity Minister, Mr. S. Ramachandran (who was deputising for the Chief Minister at the function), came through the exchange.

The Union Minister said it was the Government policy to introduce digital exchanges and other equipment based on the latest technology in metropolitan cities as part of modernisation. Factories were being set up in Gonda in Uttar Pradesh and in Bangalore for manufacture of equipment. The Gonda plant was expected to go on stream by March 1985. The two factories together were expected to provide five lakh lines a year which would help clear a chunk of the waiting list for phone connections.

Expansion, but problems: Claiming that there had been a big expansion of telecommunication facilities since independence, Mr. Gadgil said the number of phones had gone up from 80,000 to 30 lakhs with 10,000 exchanges. Phone facility was available only at 500 places in August 1947 but now 22,000 places had it and the telephone networks had also increased from 600 channels and circuits to 72,000. But all this brought in its wake problems in the working of the phone system. Lack of adequate finance was one of the reasons why it could not be improved to the satisfaction of the people. The Bombay electronic exchange cost Rs. 16 crores.

Low telephone density was another reason for the defects in the working of the system. There were only two or three telephones for every 1000 people as compared to 800 instruments in the U. K. or Germany. The department was trying to improve maintenance by upgrading the training given to telecom personnel. The Minister appealed to subscribers to be brief on the telephone "until our capacity expands".

Mr. Ramachandran said Madras was the first city in the country to get the telephone facility. It also got the first crossbar exchange in 1967 and now, the first electronic exchange in the south. The critics of the department did not realise that it was trying to provide facilities against heavy odds. Nevertheless, users' complaints on utilities like telephone and electricity services should be attended to promptly.

Old equipment will go: Secretary, Mr. K. Thomas Kora, said the Nungambakkam exchange, besides being highly reliable, would provide facilities like abbreviated dialling, call transfers which required special type of imported equipment. The P and T Board would take steps to provide these equipment.

In future, outmoded, electro-mechanical exchanges would be used only for expansion of the existing exchanges and for creating facilities in far off suburban areas. It was also proposed to replace eight lakh old exchange equipment. By 1990, there would be no manual exchange and all old equipment would have been replaced.

Mr. Sasaki, Consul-General of Japan, said the Nungambakkam exchange was the result of cooperation between India and Japan. (The equipment has been imported from that country).

Referring to assistance to India, he said that his country had so far provided 600 billion yen (Rs. 2,900 crores) as credit. The Japanese Prime Minister had offered to step up yen credit and also to provide grant in aid for educational, medical and social purposes.

Welcoming the gathering, Mr. V. M. Sundaram, general manager, Madras Telephones, said that as against three to four years taken to construct an exchange building, the Nungambakkam exchange had been raised in a record 18 months. Out of 5,000 new phone connections proposed to be given, 2,000 would be provided in the current financial year. The primary effort was directed towards decongesting the existing exchanges.

Mr. C. V. Rajan, deputy general manager (Internal Planning), proposed a vote of thanks.

CSO: 5550/0010

PLANS TO STRENGTHEN, EXPAND NATIONAL RADIO TOLD

Calcutta THE STATESMAN in English 9 Oct 84 p 1

[Text] To overcome "interference" by radio stations of the neighbouring coun-
tries, such as Bangladesh and China, All India Radio has taken up a comprehensive
programme to strengthen its transmission stations, especially in the north-eastern
region.

Sources said in Calcutta on Monday that the AIR authorities were worried over the
continual shrinkage of its area of coverage in the bordering States. The trans-
mission of AIR programmes had remained weak over the years while the neighbouring
countries had powerful transmission stations. Listeners, too, were unhappy as
the reception of AIR's important stations was faint while those of the neighbour-
ing countries could be picked up clearly.

AIR, is installing several powerful transmission equipment at Dibrugarh, Gauhati,
Shillong, Siliguri, Ranchi and Patna. New studios are also being built at Aizwal,
Kurseong and Patna. A powerful 300-KW transmitter is being installed at Dibrugarh;
100 KW transmitters are being installed in Siliguri, Shillong, Ranchi and Patna
and two 50 KW transmitters will be set up at Gauhati and Shillong. The present
transmission capacity of Siliguri and Ranchi stations was 20 KW and 10 KW, re-
spectively.

Mr N. J. Nair, Chief Engineer of AIR's East Zone, said in Calcutta on Monday
that the transmitters was expected to be installed by the end of the year. Some
of the transmitters, like the one at Gauhati, will broadcast on "shortwave" so
that the radio programmes can extend to a larger region. He said that till now
the AIR depended mostly on the giant 1,000 KW transmitter at Mogra in Hooghly
even for far-flung areas. Now the installation of transmitters at different key
places would substantially improve the reception of AIR programmes.

According to Mr Nair, a new kind of noise-free transmission was being planned
shortly in all AIR stations. The new system, known as "FM" or "frequency modula-
tion", could cut down the interference and overlapping of stations.

The FM transmission had been introduced in Calcutta, Madras and Delhi for a limited
period. But for receiving FM programmes, Mr Nair said, one needed special radio
sets. He hoped that the noise-free FM transmission would be introduced extensively
in smaller stations of AIR in the Seventh Plan.

CSO: 5550/0013

EFFORTS UNDERWAY TO FABRICATE INDIGENOUS SATELLITES

New Delhi PATRIOT in English 11 Oct 84 p 5

[Text] Ahmedabad, Oct 10 (PTI)—Efforts are under way at the Satellite Technology Centre (STC) here, to indigenously develop and fabricate the "INSAT II" series of satellites and launch vehicles to put these satellites into orbit in the 1990s.

The Director of STC, Prof B V Chitnis said the satellite technology developed under the "APPLE" programme and other scientific and remote sensing satellite programmes would come in handy to achieve this goal.

"An "INSAT II" test satellite would be launched in 1988-89 and would be followed by the operational second generation satellite. The satellite design, now in progress, would take into account the Indian launch capabilities, Prof Chitnis said.

The year 1986 would see the launch of "ASLV", an augmented "SLV" capable of putting 150 kg payload in the near earth orbit and would be followed by the polar satellite launch (PSLV) which would act as a workhorse for launching operational remote sensing satellite

(about 1000 kg payload in a 900 km orbit). The "PSLV" would be upgraded to geosynchronous launch vehicle in the early 1990s.

The second generation of "INSAT" would provide increased number of transponders for telephone traffic, better interconnectivity between locations and capacity for new services. The satellites were being designed keeping in view the need for regional services in TV broadcasting and radio.

Another move to bring to Indian university and college students a series of television lectures produced by the University of Sydney television service through the Indian satellite, INSAT IB.

The lectures, shown each year as part of first-year courses in Physics and Biology at the University of Sydney, will be shown following an agreement between the University Grants Commission (UGC) and the University of Sydney.

Although formal agreement has not yet been reached, it is expected that the material will begin being broadcast by the end of the year, according to an Australian Information Service release in New Delhi on Wednesday.

The Director of the University Television Service, Mr Andrew Greig, who recently assisted with a three-week workshop on educational television at the Space Applications Centre at Ahmedabad, said the TV lectures would help fill a gap in suitable material for transmission through the Indian satellite.

Mr Greig hoped that the videotapes of the lectures would now be purchased to provide material for new, six-day-a-week university educational programme being telecast via satellite for an hour a day to some 5,000 colleges and universities in India under the Auspices of the UGC.

In addition, the Vice-Chancellor of Gujarat University in Ahmedabad, which has a student enrolment of 100,000, had proposed a collaborative programme with the University of Sydney.

CSO: 5550/0012

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BRIEFS

148TH TV RELAY CENTER—Calicut, Oct. 4. The Union Minister of State for External Affairs, Mr. A. A. Rahim, inaugurated on Thursday a low-power television relay centre at Palikkunnu, Cannanore, taking the number of TV centres in Kerala to four. This was the 148th low power TV centre to be inaugurated under a crash programme. The Cannanore centre is expected to cover 25 km and reach about seven lakh viewers. Besides Cannanore and suburbs the towns and villages that will be covered are Chirakkal, Valapatanam, Eddakad, Tellicherry, Kuthuparambu, Mettanur and Taliparamba. [Text] [Madras THE HINDU in English 5 Oct 84 p 7]

CSO: 5550/0011

TELECOMMUNICATIONS PROJECTS REVIEWED

Casablanca MAROC SOIR in French 19 Oct 84 pp 1, 4

[Article "Posts and Telecommunications Ministry's Plan for Next Six Years"]

[Text] Telephone: 584,000 new subscribers.
Telex: 10,500 new stations in service.
Acquisition of 12,800 bilingual teleprinters.
Construction of an earth station to interface with ARABSAT.
Expansion of INTELSAT.
Improvement of regional and international services, especially
within the Middle East and the Gulf region.
Creation of a 3,000-subscriber network of radio-telephones.

The importance of telecommunications in economic and social
development is well established.

In effect, in today's world where fast flows of information are
indispensable to effective business management, inadequate
telecommunications services amount to an insurmountable
constraint on development.

For example, telecommunications plays a critical role in the sectors of
tourism, health, maritime fishing, agriculture, commerce and industry,
journalism, and law enforcement.

It is an effective and indispensable tool in booking hotel and transportation
reservations, keeping tourists in touch with their country of origin, handling
medical emergencies, maintaining distribution systems, provisioning, operation
of ships at sea, the struggle against rural isolation, national defense, etc.

Since it actually consumes little energy itself, telecommunications actually
contributes to energy conservation, by reducing the need for vehicular travel.
All the studies that have been carried out on this subject have shown that a
good telephone "fleet" is more important than a good automobile fleet.

In addition to the influence it exerts on other sectors of the national
economy, the telecommunications sector is also highly profitable; it is a not
insignificant source of revenue for the state.

Moreover, telecommunications leaps over boundaries and distances; it thus contributes to the dialogue between civilizations and the search for peace among men and peoples.

In the developed countries people already talk about the "wired society" to describe humanity's pressing need to communicate and stay informed.

In our own country, where the need for communications is equally pressing, one might be justified in asking about the actual condition of the national telecommunications network.

Status of the Network

The condition of Morocco's telecommunications system has been continually declining since 1978; there is currently a gross imbalance between supply and demand, and the quality of service has deteriorated, a logical consequence of saturation and the aging of equipment after a long period of neglect.

The following data base gives a disturbing glimpse of the condition of the nation's telecommunications system at the end of 1984 (based on estimates).

	Telephone	Telex
Subscribers served	216,000	5,500
Density (subscribers per 100 inhabitants	.99	0.025
System capacity	246,000	7,100
Current use level	87.0%	77.0%
Requests pending	177,000	1,500
Rate of growth of demand	25.0%	14.0%
Rate of service growth	7.0%	8.0%
Rate of satisfaction of demand*	56.0%	78.5%
Average wait for connection	73 mo	30 mo

* The rate of satisfaction of demand represents, in percentage terms, the ratio between the number of subscribers served and total service demand (subscribers served plus requests).

Telephone Exchanges

The national network is divided into geographic zones called local networks. There are 1,200 local networks, of which only 81 are automated, with the help of 107 telephone exchanges. Thus, the geographical penetration of automation is very poor (6.75 percent).

These exchanges have a total capacity of 246,000 automatic subscribers' lines.

The manual and semi-automatic networks have a capacity of 29,000 lines.

In order to maintain adequate quality of service, a large system should not operate in excess of 80 to 85 percent capacity, in terms of installed subscriber equipment. Now we are currently operating at 87 percent of capacity; some networks have even reached 100 percent, or total saturation.

Moreover, the aging equipment continues to cause problems: 50,000 subscriber units in the rotary dialing networks are 30 to 50 years old, and it is no longer possible to find spare parts for them on the world market; spare parts are also difficult to provide for the 91,574 lines using Pentaconta technology.

Transmission Infrastructure

With regard to the transmission infrastructure, 1,200 telephone circuits, or 24 percent of the total, are obsolete (30 to 40 years old); the urban network is in large part composed of old lead-sheathed cable and naked wire strung above-ground, a fact which is responsible for an increasing number of breakdowns of subscriber lines and inter-exchange cables.

In most rural localities served by above-ground lines, telephone service is available less than 6 months out of 12, either because of deterioration of the above-ground lines (50 percent of the existing lines are more than 10 years old) or because of the obsolescence of terminal equipment (ACR [expansion unknown] equipment, switchboards and monitoring boards).

Coastal Stations

The network of four maritime radio stations (Casablanca, Tangiers, Safi and Agadir) has not been expanded in 11 years and is far from adequate to cover the entire Moroccan littoral.

Those stations are not even sufficient to handle all of the Moroccan ships, let alone distress calls and part of the telegraphic traffic load. The remainder of the traffic, including the most profitable portion, is diverted to Spanish or French stations.

The peak traffic load is considerably higher than the capacity of the system.

This situation is the result of overloads on the telephone exchanges and significant growth in subscriber use of the system.

Consequently, one frequently has to wait for a long time to get a dial tone, and calls have to be placed repeatedly, which is partly responsible for the breakdown of some exchanges at peak load times.

The table below, for example, gives some idea of the percentage of traffic lost at peak hours in three Moroccan cities.

Traffic	Casablanca	Rabat	Meknes
Local	18.3%	9.3%	18.0%
Urban	51.7%	27.5%	20.0%
Interurban	37.0%	49.7%	29.0%

It can be calculated that even without the jamming up of exchanges, a significant percentage of calls cannot be completed on the subscriber's first attempt.

The results, when compared against the various technologies employed, show that the lost call rate is very high for the old electronic systems (Metaconta and E-10).

The national network is operating at between 13 and 20 percent efficiency, while Tunisia's runs at about 32 percent and Europe's at 60 percent.

Also, the Moroccan network is scarcely able to meet its responsibilities as an integral part of the international telecommunications system, as a result of the saturation of the international switching centers, even though a major investment has been made for the acquisition of underwater cables.

The deficit shown in meeting our international obligations, as a result of insufficient equipment in those switching centers, amounts to 26 percent (1,400 lines in service, compared to 1,900 needed).

Requests Pending

By the end of 1984 the waiting list for telephone service will be up to about 170,000 and the waiting list for telex service approximately 1,500.

The average annual growth in demand observed over the last 5 years has been 25 percent for telephone service and 14 percent for telex, while the rate of growth of subscribers has been only 7 percent for telephones and 8 percent for telex.

The average delay in filling service orders is currently 73 months for telephone and 30 months for telex.

Of course, the waiting list includes many industrialists, businessmen, doctors, etc., for whom telecommunications serve as an indispensable work tool.

Density of Telephone Service

Morocco, with 0.99 lines and 1.2 phones per 100 inhabitants (estimated density as of 31 Dec 1984) is among the countries with the lowest density of service in the world.

For example, the corresponding densities are 59.6 and 85.9 for Sweden; 41 and 76 for the U.S.; 35.6 and 54.1 for France; 25.8 and 31.7 for Greece; 11.4 and 15.5 for Portugal; 3.8 and 4.9 for Syria; 2 and 3.2 for Tunisia (Source: ITU [International Telecommunication Union] December 1982).

Reforming the Telecommunications Sector

The alarming condition of telecommunications in Morocco, described above, has been noted by public officials, who assigned an interministerial committee in 1982 to make an in-depth study of the sector and to identify ways and means of insuring the sector's ability to play its proper role as an economic agent conditioning the activity of all the productive sectors of the nation.

The conclusions reached by the committee led to the creation, in January 1984, of a public agency endowed with industrial and commercial interests, legal status, and financial autonomy. It is called the National Office of Posts and Telecommunications [ONPT].

The agency has been provided with precise objectives to pursue in modernizing the system, financing its programs in part from its own resources and in part by external loans, and adopting new structures better adapted to its industrial and commercial character. These objectives, shown in the following table, show the dimensions of the work to be accomplished if the sector is to be effectively renovated.

	Situation 31 Dec 84	Objectives 31 Dec 87	Objectives 31 Dec 90
Phone Subscribers	216,000	400,000	800,000
Exchange Capacity	246,000	500,000	1,065,000
Phones/100 inhab.	0.99	1.70	3.00
Supply/Demand	59%	73%	83%
Telex Subscribers	5,500	9,000	16,500
Exchange Capacity	7,100	12,000	22,000

The 1985-1990 Infrastructure Program

In order to realize these objectives, an infrastructure program for the period 1985-1990 has been drawn up by the Director of Telecommunications. The plan takes into account the fact that 1984 is a transition year which has been devoted to setting up the ONPT and revising its structures to conform with its new juridical status. The timing has been carefully planned to assure realization by progressive stages.

Telephones (thousands)

	'84	'85	'86	'87	'88	'89	'90	Total ('85-'90)
Subscribers	216	241	300	400	515	645	800	
Growth (+)	15	25	59	100	115	130	155	584
Exch.Capac.	246	321	393	500	636	833	1065	
Capacity to instal	20	78	78	110	140	201	237	844
Replacement	15	45	6	3	4	4	5	67
Expansion	5	33	72	107	136	197	232	777

Telex (thousands)

	'84	'85	'86	'87	'88	'89	'90	Total ('85-'90)
Subscribers	5.5	6.7	7.5	9.0	11.2	13.5	16.5	
Growth (+)	0.4	0.7	0.8	0.5	2.2	2.3	3.0	10.5
Exch.Capac.	7.1	9.0	10.0	12.0	15.0	18.0	22.0	
Capacity to instal	.15	1.1	1.1	2.1	3.1	3.2	4.2	14.8
Replacement	0.0	0.1	0.1	0.1	0.2	0.2	0.8	
Expansion	0.15	1.0	1.0	2.0	3.0	3.0	4.0	14.0

The physical operations involved in this vast infrastructural program, classified in broad terms according to their function, are summarized as follows:

1. Renovation and Extension of the National Network

The infrastructure program has two basic objectives intended to renovate the nation's telecommunications: improvement of the quality of service offered to consumers, and progress toward meeting demand. In order to do this, the most advanced techniques will be used to identify the best transmission and switching equipment. The critical phases of that sizeable operation are as follows:

--Installation of 844,000 new telephone lines (including the replacement of 67,000 obsolete units and the addition of 777,000 new units) to connect 584,000 new telephone subscribers. Estimated cost: 5,664 million DH.

--Creation or expansion of national (Casablanca, Rabat) and regional (Meknes, Oujda, Tetouan, Marrakech, Agadir) relay stations, and creation of two urban relay stations in Casablanca and Rabat, for a total capacity of 100,000 lines. Cost: 1,101 million DH.

--Installation of 5,500 telephone booths (3,500 on public roads and 2,000 in Posts and Telecommunications offices, for a total cost of 79.6 million DH).

--Installation or digitalization of coaxial cable along the principal arteries of the system: Casablanca-Rabat, Rabat-Tetouan, Rabat-Fes-Oujda, Oujda-Berkane, Rabat-Meknes (4 megahertz), Casablanca-Safi (4 megahertz) and Casablanca-Marrakech-Safi-Agadir, to facilitate interurban and international traffic. Estimated cost: 367 million DH.

--Expansion and construction of digital microwave links, notably including 3 140-mb [expansion unknown] per second systems (Casablanca-Marrakech, Casablanca-Rabat-Tetouan, Tetouan-Berkane) and 4 34-mb/second systems, in order to duplicate existing arteries to improve the security of the system, to complete radio links to avoid the accidental isolation of localities served by a single system, and to connect new localities into the national infrastructure. Estimated cost: 252.8 million DH.

--Acquisition of regional low-frequency systems equipped with PCM [pulse code modulation] to connect digital exchanges. Estimated cost: 127 million DH.

--Installation of 14,800 telex lines (800 to replace existing equipment and 14,000 new lines) to connect 10,500 new telex subscribers. Cost: 333.7 million DH.

--Creation of a national telex relay station in Rabat and a national and international relay station in Casablanca. Estimated cost: 118.8 million DH.

--Acquisition of 12,800 bilingual teleprinters equipped with both Arabic and Roman characters (3,000 to replace existing printers and 9,800 new ones), for a total cost of 593 million DH.

2. Development of the National Network

--Creation of two new international switching centers, in Casablanca and Rabat, equipped to carry 6,230 international lines. Cost: 1,319 million DH.

--Acquisition of 7,110 telephone lines in the systems of international undersea cables, to satisfy traffic demands. Cost: 652.7 million DH.

--Contruction of an ARABSAT earth station and expansion of the INTELSAT earth station. These two stations, which will have an overall capacity of 650 telephone lines per satellite, will provide communications with the Middle East and the Arab [Persian] Gulf, as well as intercontinental communications over very large distances. Cost: 128.7 million DH.

3. Rural and Maritime communications

--Selection of 243 of the more important rural localities in the country that are still on manual service to be connected to the national automated network.

This operation is great importance for the credibility of the regional network, and constitutes a decisive advance toward complete automation of the telephone system. The total cost is estimated at 1,078 million DH, divided as follows:
Exchanges: 291.7 million DH.
Transmission systems: 675.8 million DH.
Network cables: 11.3 million DH.

--Phase-out of all manual switchboards and semi-automatic dialing systems in the rural areas remaining after the above-described rural automization program, by means of 50,000 switching lines of a technology appropriate to our rural network. Estimated cost: 150 million DH.

--Acquisition of one-way radio links to provide telephone service to rural localities. Cost: 25 million DH.

--Acquisition of 20 carrier current antennas to expand the rural telephone system. Estimated cost: 8.1 million DH.

--Expansion of the existing maritime radio stations of Casablanca, Tangiers, Safi and Agadir, and creation of seven other regional stations, equipped for the most part with VHF, at a total cost of 45.6 million DH.

--Maintenance or construction of the equivalent of 30,000 km of bare-wire above-ground lines at an estimated cost of 162 million DH.

4. New Services

Creation of a mobile radiotelephone network extending from Fes to Marrakech (via Rabat and Casablanca) comprised of 14 stations equipped to handle a total of 3,000 subscribers. Estimated cost: 93 million DH.

Creation of a public system for bulk data transmission, which will initially be able to serve 450 subscribers by means of three switching nodes and six concentrators, with the possibility of interfacing with similar networks around the world. Cost of the project: 25 Dh [as printed].

5. Resources and Management Procedures

In addition to financial resources, what remains to be mobilized for the realization of the infrastructure program are primarily human and organizational resources.

--Human resources: the total number of persons employed in telecommunications is expected to rise from 6,810 in 1984 to 11,430 in 1990, for an increase of 67.8 percent, while the number of subscribers connected will have grown by close to 400 percent.

This situation will translate into an increase in the ratio of subscribers, which will go from 32 to 1 (1984) to 70 to 1 in 1990. The objective of increased productivity will certainly be facilitated by digital technology, which will require fewer maintenance personnel. All the same, emphasis will be put on vocational training in order to improve employee skill levels and provide them with more specialized training.

--Transport resources: everyone knows that the ONPT vehicle fleet is in a very advanced state of decrepitude. In order to realize the objectives that have been set, this fleet will have to be completely renovated and brought substantially up to strength. The study performed on this subject envisages an overall cost of 154.7 MDH for the acquisition of 1,321 vehicles of every kind during the period of the plan, including 507 to replace existing vehicles and 814 to expand the fleet.

Computerization of management systems: management of the national telecommunications system will pose increasingly difficult problems as development proceeds. These problems can only be solved by structural reorganization and recourse to computer technology, for which several important applications are foreseen, including management of the telecommunications network, telephone book production and information services. The estimated cost of these various applications comes to 94.7 MDH.

Specialized telecommunications centers: in order to master the advanced technologies that in future years will be used by the national telecommunications industry, a center for telecommunications studies will be established. Along the same lines, a center for oversight of the national telecommunications network will be created to provide continuous monitoring of the system, and--if need be--rapid intervention. Cost of the operation: 50 MDH.

--Line construction centers: seven regional line construction centers will be established in various locations around the country, with the aim of rationally allocating the ONPT's resources and improving the efficiency of the urban networks. Cost of the project: 30 MDH.

REVENUE SCHEDULE

	1985	1986	1987	1988	1989	1990	Total
Base tax	0.50	0.50	0.60	0.60	0.70	0.70	
Incr. in phone subscrbs. (000s)	241	300	400	515	645	800	
Incr. in telex subscrbs. (000s)	6.7	7.5	9.0	11.1	13.5	16.5	
Telephone revenue (millions DH)	876.0	1100.0	1179.0	2387.0	3506.0	4364.0	13372.0
Telex revenue (millions DH)	156.0	181.5	258.4	316.8	451.5	548.6	1912.8
Telegraph revenue (millions DH)	8.0	8.0	8.5	5.0	9.0	8.5	51.0
TOTAL REVENUE (millions DH)	1040.0	1289.5	2045.9	2672.8	3966.5	4921.1	15939.8

The infrastructure program will be financed by the telecommunications products. The predicted telecommunications revenues calculated for the 1985-1990 period are shown in the preceding chart. The base tax (in millions DH) is the basic factor in setting rates for telecommunications services. The rate of that tax has a decisive effect on the volume of revenue. It should perhaps be noted that during the period of the plan three adjustments of the base tax are envisaged:

1987 +0.10 DH
1988 +0.05 DH
1989 +0.10 DH

Industrialization of Telecommunications Equipment

The realization of this program will facilitate the gradual transfer of technology, from the point of view of independence from the producing countries, which means the establishment of local production units for mass consumption products such as exchanges, telephones and PCM systems.

Given the scope of this program, it will be necessary to have subcontractors perform tasks presently handled by ONPT, such as the laying of lines, even installation of cables and connection of subscriber service, in order to stay on the development planning schedule.

Conclusion

The completion of such an important infrastructure program is unprecedented in the annals of Moroccan telecommunications. It will obviously have major implications:for ONPT, in terms of conducting an operation of such great scope, for the administration, and for the consumers, with all the many side-effects of this great national project.

For ONPT a complete redesign of structures and work methods is a sine qua non for the success of the operation.

For the administration and the consumers the benefits of improving the national telecommunications network are immeasurable and will quickly bear fruit in improved management and quality of life.

9515
CSO : 5500/4600

PANA ON AGENCY'S DIVERSIFICATION, TRAINING PROGRAMS

AB301320 Lagos NAN in English 0830 GMT 30 Oct 84

[Text] New York, Oct 29 (NAN) — The special adviser to the PAN-AFRICAN NEWS AGENCY (PANA), Prof Alfred Opubor, has said that the agency is now averaging 20,000 to 25,000 words a day, as compared to the 10,000 words a day at its inception about 18 months ago.

In an interview with the New York correspondent of the NEWS AGENCY OF NIGERIA (NAN) on Friday, Prof Opubor stated that PANA had now diversified into other areas of news coverage apart from politics. He listed these as economics, nutrition, forestry, agriculture, women, science, and technology. Prof Opubor remarked that PANA had embarked on a training program for journalists which was one of its main functions.

He said that this year, the agency had concluded two workshops on the reporting of science and technology, which were funded by the Canadian International Development Centre. As part of PANA's training program, Prof Opubor said that the agency would hold a meeting at its headquarters this week which would concentrate on the question of how to report drought and food scarcity in Africa. This is in preparation for a PANA workshop early next year for African media leaders and news agency journalists, he said.

Prof Opubor explained that PANA was not independent and was not intended to be because it was set up to state the African point of view. PANA tends to put together what the various African countries are thinking. As you know, African countries differ on a number of issues. PANA tends to show that differences in opinion do exist, he explained.

Asked when PANA would start the recruitment of its permanent staff, Prof Opubor replied: We have set the recruitment process in motion. We intend to start early next year, but we are not going to recruit massively because we still have financial problems.

CSO: 5500/22

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BRIEFS

EXPERIMENTAL TV SERVICE--The third point on the agenda of the weekly minister-
ial meeting, chaired by the president, presented by the minister of information
concerned the television project in the context of launching television broad-
casting. The Ministerial Council approved the basic details in setting up an
experimental program. The languages used in the broadcasts will be Kirundi
and French, and the programming will run from 1800 to 2100 [1600-1900] on
weekdays, and from 1800 to 2300 [1600-2100 GMT] on weekends. The council
also accepted the principle of a reduction in customs duty on television
receivers. [Text] [EA281030 Bujumbura Domestic Service in French 0420 GMT
27 Sep 84]

CSO: 5500/6

ECOWAS STUDIES NEW CONNECTIONS

Bissau NO PINTCHA in Portuguese 22 Sep 84 p 5

[Text] A delegation from the ECOWAS Fund, led by Ibrahim Souradjou Mohamed, deputy director general, and including the director of studies, two tele-communications engineers and the official in charge of loans, was in Bissau from 12 to 14 September to determine the technical and financial feasibility of the Kaolack-Banjul-Ziguinchor-Cacheu hookup.

During the work session, held in various departments of the CIT [Posts, Tele-graph and Telephone Company] with the director general accompanied by his collaborators and an exchange of viewpoints between the two delegation leaders, it was found advisable to set up two subcommittees: one technical, spearheaded by the director of the INTERCOLM [expansion unknown] program, to examine technical problems connected with the execution of the project and, the other, economic and financial, led by the director of studies and analysis of projects, which will deal particularly with any financial and legal problems connected with the project.

With regard to the project's technical aspect, the director of the INTERCOLM I program reported on the status of the stripping work and gave the CTT representatives a copy of the comparative charts showing the bids submitted in accordance with the regulations adopted by the market committee.

In an effort to determine the amount of investments necessary to carry out the project successfully, the following information was requested: the multiplex transmission plan and the extent to which the circuits between Bissau and Cacheu would be used, with extensions to Ziguinchor, Banjul and Dakar, the nature and number of circuits to be used in the service of the equipment, the line's level of frequency and signaling, the expenditure of the Cacheu and Canchungo station and improvement in the services and characteristics of the accessibility to long-distance signaling equipment.

The documents containing the answers to all the questions were given to the delegation of the ECOWAS Fund by the CTT representatives.

With regard to the station expenditures, it was decided that an increase would be made in each station with the aim of determining their real value.

The level of frequency and list of the measuring apparatuses will be transmitted subsequently by telex to the ECOWAS Fund.

In reference to the juridical, financial and organizational aspects of the project, the director of studies and analysis of projects gave the CTT officials an explanation with regard to the type of information to be compiled with the aim of pinpointing the principal problems which may arise in the project's services.

The problems examined in this area concern principally the administrative organization and operation of the CTT, the economic aspect of the project and the financial situation in the administration of telecommunications.

In dealing with the administrative organization and operation of the CTT, the CTT representatives gave the fund's delegation an administrative chart accompanied by commentaries. The fund will be given ample notice of any changes made in the organization chart.

With regard to the project's economic aspect, the ECOWAS delegation gave its assurance that the project is in keeping with the objective of the country's development.

As for the financial situation of the telecommunications administration, the CTT representatives gave the fund delegation the balances and operational accounts for the periods 1980, 1981, 1982 and 1983. Another document in the form of a questionnaire was then given to the CTT officials.

Thus, all the necessary information was obtained.

After the work session was completed, the delegation had a meeting with comrade Mussa Djassi, minister of information and telecommunications, to inform him of the results of the mission and possibly to receive his suggestions.

As a result of   meeting with the comrade minister, it was decided that Guinea-Bissau, together with the French Government, would take steps to acquire a new standard B land station with the request that the ECOWAS Fund provide all the necessary funds for the acquisition of the Bissau International Transit Center, if the French Government has only one land station.

The fund's deputy director general was pleased to note that the Guinea-Bissau Telecommunications Administration had given its total support to the special telecommunications fund in foreign currency as well as in local currency (Guinea-Bissau pesos).

FMG TO CLOSE ALL 'MUSHROOM' RADIO STATIONS

Others To Be Reequipped

AB231630 Lagos Domestic Service in English 1500 GMT 23 Oct 84

[Text] All mushroom [as heard] radio stations established in the 19 states of the country are to be closed down. The shortwave radio stations in Lagos, Ibadan, Kaduna, Enugu, and Abuja are to be reequipped to offer better services to the nation and save cost.

The decision of the Federal Military Government [FMG] on the issue was announced in Lagos today by the chief of staff, Supreme Headquarters, Brigadier Tunde Idiagbon. He was speaking at the inauguration of the committee on the rationalization of radio and television services. The committee is headed by the managing director of Cadbury, Nigeria Limited, Dr Christopher Kolade. The chief of staff noted that at present there are 19 radio stations, 4 Federal Radio Corporation of Nigeria [FRCN] zonal stations, and 19 FRCN outlets from the states, including Abuja. All together the country has a staggering figure of 48 domestic radio services providing local broadcasts daily.

On television services, Brigadier Idiagbon stated that at present Nigeria has 32 federal and state television stations with the Federal Government owning 22 of them. He remarked that in the face of the current economic doldrums, some of the stations were already finding it extremely difficult to survive due to lack of funds to maintain machines and equipment.

The chief of staff affirmed that the Federal Government owed it a duty to provide virile, functional, and effective broadcasting system in the country. That was why it could not sit idly by while such an important sector was decaying. Brigadier Idiagbon said that consequently the committee was set up to rationalize the television services provided by Nigeria Television Authority [NTA] having regard to the extent and coverage of the state television stations. The exercise, he explained, was aimed at streamlining television broadcasting in the country, saving costs, and making the service more efficient.

The chief of staff condemned the role played by the various radio and television stations during the civilian regime. He said that the stations, without exception, became [word indistinct] of political parties in power, suppressing or grossly distorting information to suit the whims and purposes of politicians. By so doing, Brigadier Idiagbon added, they fanned the embers of disunity, disaffection, and discord. They also succeeded in poisoning the political atmosphere to such an extent that law and order virtually broke down in many states of the federation.

In his response, the chairman of the committee, Dr Christopher Kolade, pledged the determination of its members. The 10-man committee has Mr T I Makonjole as its secretary. It is expected to submit its report by the 16th of next month. Other members of the committee include the director general, FRCN, Mr George Bako, the director general of NTA, Mr Vincent Maduka, and the permanent secretary, Federal Ministry of Information, Social Development, Youth, Sports, and Culture, Mr M. [...]

Idiagbon on Closings

AB241224 Lagos NAN in English 1208 GMT 24 Oct 84

[Text] Lagos, Oct. 24 (NAN) — The chief of staff, Supreme Headquarters, Brigadier Tunde Idiagbon, said in Lagos yesterday that the Federal Government would close down all mushroom radio stations [substandard state operated radio stations] established in the 19 states by the politicians.

Speaking at the inauguration of a committee on the rationalisation of radio and television services at Dodan Barracks, Brig Idiagbon said that in their place, the Federal Government would re-equip the shortwave radio station in Lagos, Ibadan, Enugu, Kaduna and Abuja to offer better services to the nation and to save cost.

He said that this was necessary because some of the stations were finding it extremely difficult to survive because of lack of funds to maintain their staff and equipment.

He noted that the politicians in an attempt to win votes engaged in an unplanned establishment of radio and television stations all over the country.

These stations, he stated, become megaphones of political parties in power, suppressing or grossly distorting information to suit the whims and caprices of the politicians

Consequently, said Brig Idiagbon, they fanned the embers of disunity, disaffection and discord and succeeded in poisoning the political atmosphere to such an extent that law and order virtually broke down in some states.

He also noted that most television stations were clustered in the state capitals where they performed overlapping functions, adding that this situation could not be allowed to continue. He expressed the hope that members of the committee would justify the confidence reposed in them

The chairman of the 10-man committee, Mr Christopher Kolade, a former director general of FRCN [Federal Radio Corporation of Nigeria], who noted that television was at its worst in the country in 1983, pledged that the committee would do its best to produce results. The committee is to rationalize the television services provided by the NTA [Nigerian Television Authority], having regard to the existence and coverage of the state television stations and the general duties of the authority as specified in the NTA decree and other relevant legislations.

The exercise is aimed at streamlining television broadcasting in the country to save cost and make the service more efficient. The committee is to submit its report not later than Nov. 16, 1984.

Many Station Closures Forecast

NC242038 Paris AFP in English 2023 GMT 24 Oct 84

[Text] Lagos, Oct 24 (AFP) — Nigeria is to close down a large number of radio stations in order to allow the country's federal stations to operate properly, Brigadier Tunde Idiagbon, number two in the military government, has said here.

Brig. Idiagbon, announcing the move yesterday at a meeting to launch a committee on electronic media, said that radio stations had "mushroomed" in the West African state.

No less than 48 stations -- 19 of them run by individual states and 19 by the federal government -- are currently broadcasting in Nigeria, he said. [figures as received]

Brig. Idiagbon also hinted that a similar decision could soon be taken in relation to Nigeria's 32 television stations, 22 of which belong to the military government

'Clarification' Given on Closures

AB241615 Lagos Domestic Service in English 1500 GMT 24 Oct 84

[Excerpt] A clarification has been given on the mushroom radio stations to be closed down by the Federal Military Government [FMG].

Those affected are the radio stations established by the Federal Radio Corporation of Nigeria FRCN in the states and not the state government-owned stations.

The clarification came from the military public relations officer, Supreme Headquarters, Major Wole Tunwayo, in an interview with a Radio Nigeria state house correspondent

He explained that state government-owned stations were allowed to continue with their programs but to pick up with Radio Nigeria for network news and programs.

Announcing the Federal Government's decision yesterday, the chief of staff, Supreme Headquarters, Brigadier Tunde Idiagbon, said that the shortwave radio stations in Lagos, Ibadan, Kaduna, Enugu, and Abuja would be reequipped to offer better services to the nation and save costs.

NIGERIAN VOICE on Closures

AB271430 Lagos International Service in English 0830 GMT 27 Oct 84

[Text]The *NIGERIAN VOICE* comments on the closure of some of the Federal Radio Corporation of Nigeria's [FRCN] radio stations. The paper, in accepting the reason advanced by the Federal Government for the closure, observes that the chief of staff did not make any official statement on the fate of the displaced staff of the FRCN.

The *VOICE* urges the committee on rationalization of radio and television broadcasting to examine the issue. The paper in addition appeals to the Federal Goverment to assist some state radio stations.

CSO: 3500/7

50

BRIEFS

TELEPHONE CONNECTION TO LUANDA--Friday morning semiautomatic telephone service was inaugurated between the People's Republic of Angola and Sao Tome and Principe with a telephone conversation between Eduardo Paulo Bonga, Angolan deputy minister of transportation and communications, and Fernando Jose Paquete da Costa, Bonga's counterpart in Sao Tome and Principe. The establishment of direct telephone-exchange relations is in keeping with the spirit of development of inter-African telecommunications, eliminating the need to pass by way of European centers and, in addition, facilitating access between the respective peoples, countries and governments. The channels of communication are active through SCPC [single channel per carrier] systems of the telecommunications centers of the National Telecommunications Enterprise of Sao Tome and Principe and the Angolan International Telecommunication Enterprise (EPTEL). In addition to telephone communications, the above enterprises are facilitating telegraphic communications, which will answer the needs of national aeronautics groups, such as ENANA [National Aeronautica Enterprise], TAAG [Angolan Domestic Airline] and, in the future, direct automatic telex service. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 16 Sep 84 p 1] 8568

CSO: 5500/15

SABC BREAKS ARMSCOR'S BAN ON DISCLOSURE

Johannesburg RAND DAILY MAIL 29 Oct 84 p 2

[Article by Mauritz Moolman]

[Text]

THE SABC breached an Armscor security ban on disclosures about equipment bought in Europe by the Coventry Four by mentioning in a newscast on Saturday night that the items had been shown to the Press.

The "extreme sensitivity" about describing the arms in detail was impressed repeatedly upon journalists who attended a Press conference arranged by Armscor in Pretoria, which was also attended by the four men and their wives.

No pictures of the items were allowed and journalists were told they could not report the fact that these items were shown at the conference. This move was believed to stem from fears that the source of the equipment could be identified and compromised because of the arms ban.

The matter was seen as so sensitive that a British television crew was not allowed to attend the conference.

But an Armscor official contacted last night said he did not think the breach was serious.

Mr Hendrik Botha, 40, a member of top management at Kentron, an Armscor subsidiary, Mr William Metelerkamp, 41, managing director of of R J Electronics International, Mr Fanie de Jager, 50, financial manager of Kentron, and Mr Kobus la Grange, 30, an engineer at Kentron, were arrested in London and charged in Coventry with smuggling weapons.

At the Press conference the four men spoke of their "degrading" experience in England and their relief at the South African government's decision not to turn them over to British authorities to face trial.

Mr Johan Adler, public relations officer for Armscor, who chaired the conference, would not allow any questions on Armscor procurement procedures and banned pictures of the items bought by the four men.

He said the Press could not describe the items, nor mention that they had seen them.

The Press was allowed, however, to identify the equipment as a magnetron, a source of microwave power used in radar equipment and a gas bottle used for cooling or as a source of power.

The SABC, however, reported in its 11pm newscast on TV1 that journalists were shown examples of the items.

The Mail's Durban correspondent reports that Dr Farouk Meer, the Natal Indian Congress's acting president, has said the men's preoccupation with a fair trial was nonsensical and absurd when it was considered against the background that they acted in protection of South Africa — an unjust, unequal society in which "hundreds are not brought to trial at all".

"Their criminality is international because they acted in support of the international crime of apartheid," he said.

Dr Andries Treurnicht, leader of the Conservative Party, repeated his statement that South Africa should have honoured its word and returned the four men for trial.

CSO: 5500/23

SOUTH AFRICA

SABC EFFORTS TO BLOCK BOP-TV SIGNALS 'FLOP'

Johannesburg THE STAR in English 13 Oct 84 p 7

[Article by Shirley Woodgate]

[Text] Reliable reports about attempts to restrict the range of Bop-TV reception indicate that the SABC's "block Bop" campaign gets the "Top Flop of the Year" award.

Thousands of television viewers on the Reef are still watching Bop-TV despite SABC efforts to limit the signal to citizens of Bophuthatswana living in South Africa.

"Virtually all the areas which received Bop before the June attempts to stop spillage are back in business," said Mr David Solovei, managing director of a local television equipment manufacturing company.

'Pay and view'

"It is no secret that the downfall of the 'block Bop' campaign lies in upgrading the equipment, bigger, better, more expensive aerials and boosters costing upwards of R200, in addition to existing equipment."

The message is pay and view, says Mr Solovei, and dedicated white Bop-watchers have flocked to install the new equipment to beat the official blockade.

"Some areas are receiving even stronger signals than before while others have to make do with a fair amount of snow. Top viewing goes to those people living on the West Rand, as far afield as Carletonville.

"Some new areas have now been included in the viewing line-up. These include Linksfield, Edenvale and Edenglen."

Informed sources report that the SABC has no further plans, now or in the future, to continue its screening.

It is believed that plans to install a microwave (at a cost of about R300 000) have been shelved and that further attempts to block the Bop signal would only weaken it to the target area of Soweto, as well as other isolated pockets of Tswanas.

The SABC's media relations organiser, Mr Lucas de Lange, said yesterday: "The SABC's only concern is to fulfil its contract with Bop-TV and to rebroadcast the Bop signal to specific areas of Soweto."

He said he had no comment to make about spillage.

● An application to establish cable television in Johannesburg has been "unfavourably considered" by the Postmaster General.

Mr Jean Venter recently received a letter turning down his request to establish cable or closed-circuit television, a medium he said was watched by 80 million viewers in America.

The two reasons given were that this would compete with SABC-TV and that the SABC was already competing with independent black states.

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Is the SABC breaking the law by limiting Bop-TV to certain areas?

This question is posed by a viewer as the October 31 deadline for radio and television licences looms nearer.

In a registered letter to the Postmaster General, Mr Bernard Hertzberg, of Houghton, contends: "Section One of the Broadcasting Act 73 of 1976 as amended defines a broadcasting service as 'a telecommunication service of transmissions consisting of, inter alia, sound and images, which takes place by means of radio and is intended for reception by the general public'."

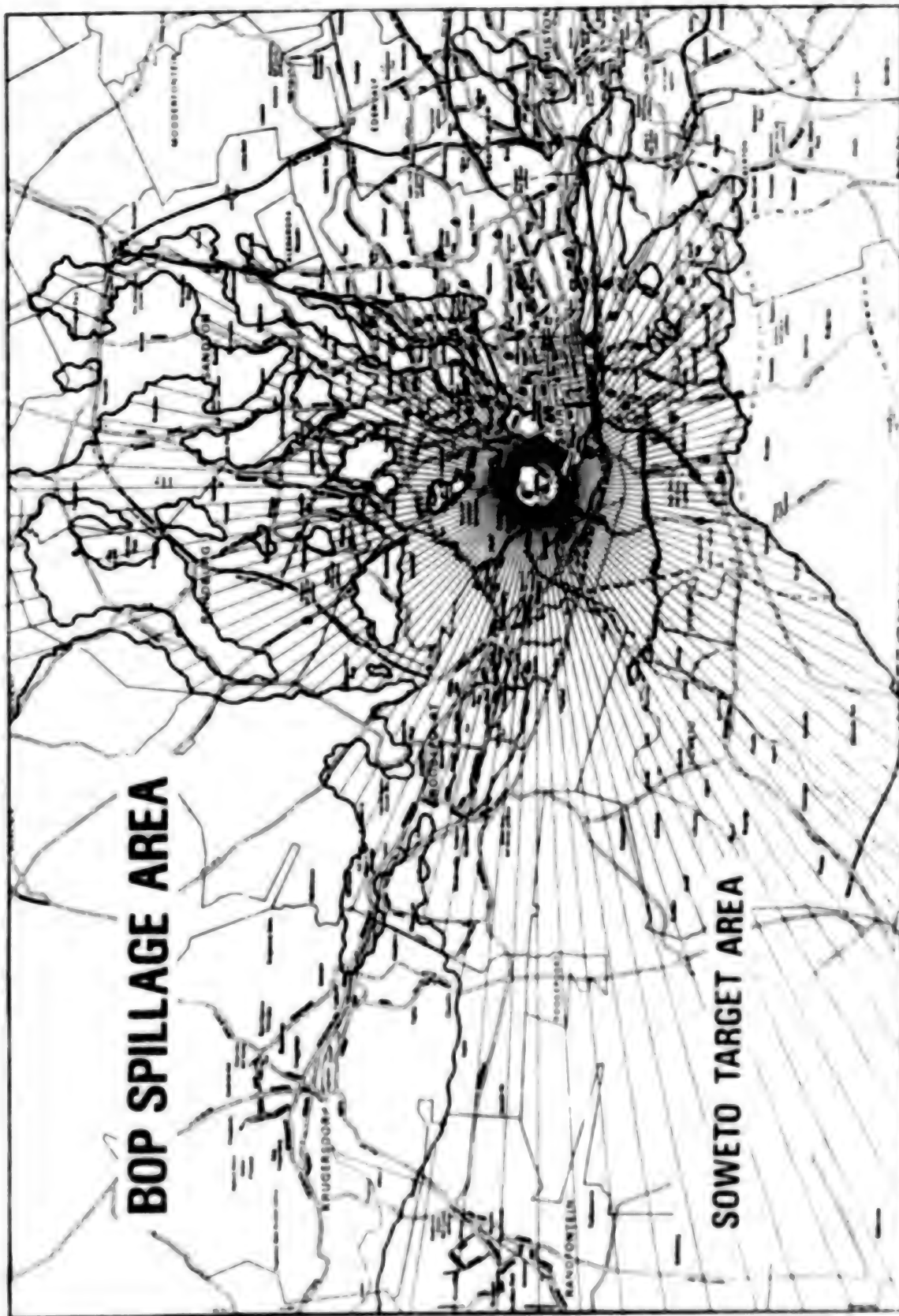He maintains his licence entitles him to receive broadcasting services from anywhere in the world.

Pointing out that the SABC relays Bop-TV only to certain areas and blocks transmission to others, Mr Hertzberg argues it is the Postmaster General's obligation to take suitable action against the SABC.

He asks whether the Postmaster General would be prepared to bring an urgent application to court to stop the SABC's actions.

When no reply had been received by yesterday, Mr Hertzberg sent off another registered letter requesting a reply before his licence became due.

The Bop-TV coverage areas indicated by signal rays on the map are theoretically predicted, but it is expected that more than 90 percent of homes in these places should obtain satisfactory pictures using the appropriate aerials and boosters. This figure will be lower towards the periphery of the service area and higher towards the site of the transmitter. Reception will also be affected by topography.

BOP SPILLAGE AREA

SOWETO TARGET AREA

SABC'S NEWS POLICY SLAMMED

Johannesburg THE STAR in English 16 Oct 84 p 9

[Text]

The SABC had no justification for excluding from its newscasts controversial material that vitally affected the interests of all the people of South Africa, said a special committee of the South African Media Council in a statement yesterday.

The committee, which deals with the free flow of news, made the statement after investigating a speech to the Cape Town Press Club on August 24 by SABC director-general Mr Riaan Eksteen.

Concern about the speech had been expressed by Dr Richard van der Ross, rector of the University of the Western Cape, who is a member of the Media Council

REMARKS

Dr van der Ross said Mr Eksteen's remarks implied that the SABC would refrain from publishing news it preferred the public not to hear

The committee had considered the full text of Mr Eksteen's speech, said the statement released in Cape Town

In part of his speech Mr Eksteen said that internationally, but also in South Africa, the media regarded itself as belonging to a new class, which mostly played an opposing, if not a hostile, role towards the government of the day and the establishment.

The SABC defined itself as being outside the new class, which regarded conflict and confrontation as paramount.

The SABC saw itself as playing a unique and independent role in the national interest (landsbelang).

The SABC would rather emphasise information than political strife.

It would focus on points of agreement in programmes and help to promote the positive rather than blowing up and promoting (aanblaas) differences.

The SABC would, in the new dispensation, unreservedly, unequivocally and positively promote the interests and security of South Africa and all its inhabitants, the maintenance of public order, obedience to the laws of the country, sound relations between population groups and decency, decorum and good taste.

It would fulfil its information function without becoming a platform for those wishing to create revolution, unrest or disruption of the country

"This viewpoint of the SABC implies that those

groups and parties which, of their own choice, opted out of consensus politics in favour of revolution and undemocratic methods cannot expect the SABC to reflect their views," Mr Eksteen said.

"There will therefore in the new dispensation be no sympathetic ear, for instance, for the ANC or its faceless fellow-travellers."

The Media Council committee said in its comment: "In the view of the committee, the SABC is not justified in excluding from its broadcasts and television newscasts controversy about matters of common concern to, and that vitally affect the interests of, all the people of South Africa.

PRINCIPLES

"The principles Mr Eksteen has stated should be applied so that the public is informed of, to mention but a single example, the standpoint of those who oppose the new political dispensation and who called for a boycott of the recent coloured and Indian elections.

"Mr Eksteen said the SABC would not reflect the standpoint of those who had opted out of what he called consensus politics.

"It is, on the contrary, the view of the committee that the members of the public have a right to be conscientiously informed of all relevant facts relating to the political debate, so as to enable them to arrive at their own conclusions in regard to such matters."

The Media Council committee said its comments had to be viewed in the light that the SABC was the sole electronic medium in South Africa, was constituted under statute and its operations were financed from public funds.

It was a necessary concomitant of this unique status that the SABC had an urgent responsibility to present to its viewers and listeners a fair and balanced factual picture of matters of public importance affecting their well-being.

The committee added: "Mr Eksteen rightly points out, relying on the views of Abraham Lincoln, that 'he who moulds public opinion goes deeper than he who enacts statutes and pronounces decisions.'"

The committee also refers to a quote by Mr Eksteen from the report of the United States Commission on Freedom of the Press: "The media are the most powerful single influence in the shaping of culture and opinion."
— Sapa.

CSO: 5500/21

SABC-TV PROGRAM DIRECTOR ON IMPACT OF BUDGETING CUTS

Johannesburg RAND DAILY MAIL in English 17 Oct 84 p 13

[Chris Swanepoel interviewed by Manuel Correia--date, place not given]

[Text]

Q. With expenditure for 1985 now being pegged at the 1984 level because of economic conditions, how will overseas purchases of material be affected?

OUR purchases will of course be affected — not only by the limited available funds but also by currency problems. We will therefore have to be very selective.

The buying philosophy is based on the needs dictated by our programme schedules. We are confident that we shall be able to purchase the rights to the best on offer to the SABC and to be able to obtain sufficient material of quality to provide good viewing on TV1.

Q. How will the budget cuts affect the purchase of feature films, bearing in mind that the local video industry has a stranglehold on the market and prevents you from buying films less than 12 years old and also prevents your purchasing certain television series?

IT IS not the video market that has a stranglehold on the market for feature films. The 12-year period is a gentleman's agreement with the local film theatre people.

A slot for Golden Oldies is a possibility, but I must point out that there is a vast market of really excellent films older than 12 years.

Q. Are we likely to see a scaling down in dubbing activities?

THERE will definitely be no scaling down in dubbing activities. Dubbing is expensive, but much cheaper than production.

Q. Do you see the budget cuts affecting quality?

NO, WHY should it? Talent counts and not sets and props. Rationalisation, more effective production methods, good management could even have a positive effect on the quality of the work produced.

Q. I think it is generally accepted that TV1 is now so crowded that it is virtually impossible to accommodate all the material the station should accommodate. Yet the establishment of TV4 will surely be delayed by current financial cutbacks, which will also mean it will probably become more expensive to establish a channel in future. What is the solution, in your view?

SCHEDULING TV1, divided into two language sections, is extremely difficult. Another channel would provide a choice for our viewers and allow us to schedule for minority audiences.

There has often been talk of a TV4, but you have rightly pointed out that under the pressure of the present economic situation an additional channel seems highly improbable.

We also have to look very closely at the available talent base.

Q. Will the budget cuts force a cutback in sports broadcasts? Would one solution to promote more local support be to black out the region in which an event is being held and transmit the event to the rest of the country, with sporting bodies and the SABC sharing the cost of installing the necessary equipment?

WE HAVE budgeted for considerable overseas and local sports coverage. Blacking out does not seem to be a practical solution. The cost of installing the necessary equipment is prohibitive and would not be worth the while.

Q. I understand that the SABC is keen to give an impetus to the local film and television industry to produce material for television, possibly on the lines of the successful Australian experiment. How do you see such an impetus being applied? Afrikaans television has made giant strides in providing impressive indigenous material but English television still has a long way to go to do the same.

ALL TELEVISION organisations are in some way or other involved in the feature film industry. Television and films are closely connected. The SABC participated in the production of various features like "River Men," "Sanna," "Funny People II".

We will definitely not consider making a feature film unless a very good script is presented and it appears to be an economically viable proposition.

I disagree with you that English television is lagging behind Afrikaans television. I would like to remind you of some of the highlights: "The Outcasts," "Westgate," "1922," "The Nile Crocodile," "Blood Wedding," "The Elton John Songbook," "The Beatles Song-Book" and "The King and I".

For the Johannesburg centenary a thrilling project on Barney Barnato is in preparation.

Q. Many critics are unhappy about the way educational television programmes are being slotted, either too early or too late. What is your reaction? Do you see the SABC asking the Government for permission to extend broadcasting areas or time?

WE ARE already accommodating some educational programmes in the existing schedule. Now that we have heard from the Government that the SABC will have to broadcast educational programmes of a formal nature, it seems only logical that these programmes will have to be broadcast in appropriate times outside our regular schedule.

I wonder whether you have noticed that certain educational programmes are preceded by an announcement that they may be recorded off-air for future use by registered educational institutions?

Having only one channel at our disposal we shall never be able to place these programmes in the most effective slot. But with the abovementioned concession, the time of broadcast is not of the utmost importance.

Perhaps broadcasts on a Saturday morning, or other mornings, or early afternoons are a possibility to be considered.

Q. The possibility of the Artes Awards being scaled down because of the budget cuts has been floated in some quarters. Will this, in fact, be the case and will the SABC do away with the often unfruitful practice of recruiting overseas artists for the occasion at enormous expense? Will it be possible for the Asteras, the Artes, the Bokmakieries and other awards to be consolidated into one big bash every year?

THE Artes Ceremony will definitely be scaled down. We nevertheless hope that the event will provide good entertainment. I would like to correct the assumption that the SABC recruited overseas artists for the occasion at tremendous expense.

It was almost always done in collaboration with outside organisations running promotions, or when artists were on a private visit to South Africa.

This year, if an international celebrity happens to be in South Africa at that time, the SABC would of course invite him or her to the Artes as guest. After all, we are in show business.

I think it impractical to amalgamate all the awards into one ceremony. One would just get an endless procession of people marching up to the stage. This would not sustain viewer interest and would diminish the entertainment mix.

Q. With the new "dispensation" it appears to me that TV1 will have to reflect the cultures contained in it in a meaningful manner. Without wishing to touch on politics, it would seem to me that activities and talent of coloured persons will more readily integrate into your existing activities. However, in the case of Indians, the matter is slightly more complex, given the diverse cultural and religious observances of the Indian people? In this regard are we likely to see the screening of Indian films in the original language, with English subtitles, for instance?

NOT ON account of the new dispensation, but because TV1 caters for our Afrikaans-speaking and English-speaking viewers, the SABC has been trying to inte-

grate activities and talent of coloured persons into the activities. We are always on the lookout for new talent.

You have probably seen Paul Jacobs, a new continuity announcer. Shan Moodley was appointed as producer. Mohammed Sheik is a full-time announcer on the Afrikaans Radio Service.

An Afrikaans drama production with an all-coloured cast is in preparation — "Jantje" — and an English all-coloured drama — "Chopsticks" — will be screened during the English drama season.

The problem with screening Indian films in the original language is the matter of precedent. How could one then refuse requests from, say, the large Portuguese population and other groups?

It is, however, a matter that should be investigated thoroughly.

Q. Regarding the possibility of getting material from Britain, how close is the SABC to purchasing Equity material?

NO NEARER or no further. We would be only too willing to buy British programmes because of the excellent quality of much of the material and because we could use it very well.

It seems very unlikely that we can expect any change in the situation. It is a great pity. The English actors lose on the deal and we are deprived of good material.

And, of course, South African English-speaking people have every right to expect productions from the source of English culture as opposed to the American and other products we have to buy.

Much as we would like to change the situation, we can't.

CSO: 5500/21

EDITORIAL ON SABC POLICY

Johannesburg THE STAR in English 17 Oct 84 p 6

[Editorial]

[Text]

IN THE authoritarian mind, consensus politics inevitably raises the question of "consensus journalism". When everyone — or at least the nominal 25 percent of South Africans with constitutional rights — is striving together in the national interest, shouldn't the media also be helping? Shouldn't they be expected to accentuate the positive, de-emphasise conflict and division? The question was recently answered on behalf of the country's most powerful single medium, the SABC.

In a speech to the Cape Town Press Club, director-general Mr Riaan Eksteen said the corporation would rather emphasise information than political strife. Groups which chose to opt out of consensus politics "in favour of revolution and undemocratic methods" could not expect the SABC to reflect their views. True to Mr Eksteen's word, the SABC's coverage of the Indian and coloured elections virtually ignored the boycott campaign which eventually emerged as the biggest election "winner".

Was the SABC thereby doing the country a service? No, says a special committee of the SA Media Council which deals with the free flow of news. The committee has upheld the public's right to be "conscientiously informed of all relevant facts relating to the political debate, so as to enable them to arrive at their own conclusions".

We trust the SABC is tuned in. For too many years it has behaved like an information arm of the National Party rather than the independent public body its charter intended it to be. To justify its partisan role in the name of the "new" politics makes it no more acceptable. NP-style consensus is a highly controversial topic. *Legitimate* opposition to it is widespread, and it is the SABC's duty to reflect all its facets. The truth may sometimes hurt, but it is the only way to a better society.

CSO: 5500/21

EKSTEEN OBJECTS TO MEDIA COUNCIL FINDINGS

Johannesburg THE STAR in English 17 Oct 84 p 3

[Text]

The director-general of the SABC, Mr Riaan Eksteen, made a formal objection to the Media Council yesterday afternoon about the findings of a committee of the council concerning SABC policy.

A special committee of the Media Council dealing with the free flow of information considered points of policy discussed by Mr Eksteen in a speech to the Cape Town Press Club on August 24.

Mr Eksteen said in his objection that the committee, which had dealt with his speech on the basis of unfounded deductions and selective and incompleted quotations, had come without justification to the conclusion that the SABC did not cover certain kinds of news.

Mr Eksteen said the Media Council was creating an entirely false picture of the SABC's approach and that in its finding, it had given a seriously distorted meaning to his speech.

He said nothing he had said or implied could be interpreted as being in conflict with the free flow of information.

What was clear was that the SABC, while presenting reality as a whole, did not lend itself to the promotion of ideological deeds linked to revolution, violence and undemocratic activities.

Mr Eksteen went on to say that the standpoint of the Media Council was not in accordance with the assurances repeatedly given to the SABC that nothing in the constitution of the Media Council empowered it to interfere with the editorial policy of any medium. The SABC therefore disputed the right of the Media Council to express itself on such matters. — Sapa

CSO: 5500/21

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BRIEFS

EKSTEEN'S RESIGNATION URGED--Kimberley.--A Conservative Party delegate,
Professor Fanie Jacobs, yesterday called on the chairman of the SABC Board
of Control, Mr Riaan Eksteen, to resign. "If you do not have the will-power
to stand up against Pik Botha (Minister of Foreign Affairs and Information)
when he makes a fool of himself, you must resign," he said at the CP's na-
tional congress in Kimberley yesterday. "My message is: We ask you to re-
sign your post because you are not qualified for it. If you do not have the
courage to do it we call on the Minister to do it for you." Prof Jacobs
was speaking on a resolution in which strong objection was made against the
"open abuse" of the SABC by the Government to "blatantly propogate NP policy".
He called for the setting up of a committee to meet the SABC's board to dis-
cuss the matter. Replying, Mr Tom Langley of Soutpansperg said he did not
feel such a committee would have any success, because it would have difficulty
getting its message through. The Minister, Mr Botha, was using the corporation
to condition the public to integration. The resolution, including the amend-
ment calling for such a committee, was adopted unanimously. [Text] [Johannes-
burg RAND DAILY MAIL in English 29 Oct 84 p 2]

CSO: 5500/23

RSFSR DEPUTY MINISTER ON SATELLITE TV NETWORK

PM131106 Moscow SOVETSKAYA ROSSIYA in Russian 5 Jun 84 First Edition p 2

[Interview, in response to readers' letters, with V.N. Mantsev, RSFSR first deputy minister of communications, by M. Krushinskiy: "On Postal Routes"]

[Excerpt] [Krushinskiy] You mentioned space communication facilities....

[Mantsev] Without them the current development of television broadcasting would be unthinkable. Today 90 percent of the RSFSR population receive television broadcasts, and over 70 percent receive two channels. The communication system using the Ekran artificial earth satellite has made it possible to resolve this task in regions of Siberia, the Far North, and parts of the Far East, encompassing in all almost 20 million people. Last year alone Ekran equipment went into service in 425 population centers, and it is now in operation in 2,100 centers in all.

This work is continuing, and at the same time ground receiving stations are being built for another space communications system -- the Moskva. In the RSFSR 95 such stations are already in operation. Thanks to them Yakutiya, Khabarovsk and Maritime Kray, and Chita and Amur Oblast inhabitants last year became able to receive two Central Television channels. Work is now under way to provide Kamchatka, Sakhalin, and Magadan Oblasts with these broadcasts in 1985. I must note that building a Moskva station involves considerable expenditure and we cannot manage without the assistance of local party and soviet organizations.

CSO: 5500/1010

EC COMMISSION OUTLINES PLAN FOR TRANSNATIONAL BROADCASTING

Frankfurt/Main FRANKFURTER ZEITUNG/BLICK DURCH ZIE WIRTSCHAFT in German
20 Aug 84 p 3

[Article by Dr Martin Vogel: "A Common Market for Broadcasting Before Long?"]

[Text] Frankfurt. On 14 June 1984, the Commission of the European Communi-
ties presented to the public a Green Book concerning the establishment of a
common market for broadcasting, above all satellite and cable broadcasting.
The report (comprising 367 pages) includes an extensive description (combin-
ing technical, cultural, social, economic and legal considerations) of the
radio networks in the individual member states, a detailed study of the prob-
lem of application of the EEC Treaty in the field of broadcasting, and pro-
posals concerning assimilation of the individual states' legal regulations to
ensure transnational broadcasting.

The Commission thus met a request of the European Parliament, which on
12 March 1982 had adopted a resolution that emphasized the necessity "to draw
up a European radio and television code designed--among other things--to pro-
tect young people and to regulate the use of community-wide advertising"
(Point 7 of the Resolution). In adopting the Resolution, the European Parlia-
ment had taken a long step toward implementation of a free, transnational
exchange of information and ideas, which not only is called for by virtue of
the freedom of opinion and information guaranteed by Article 10 of the Euro-
pean Convention on Human Rights, but which also represents a key integration
factor in a unified Europe.

In a report delivered in advance on behalf of the Committee for Youth, Cul-
ture, Education, Information and Sports, deputy Wilhelm Hahn emphasizes:
"Regarding the unification of Europe, information is an important factor,
perhaps the most important factor.... The unification of Europe will be
achieved only if the Europeans want it. The Europeans will want it only if
there develops a European consciousness. A European consciousness will
develop only if the Europeans are informed accordingly."

Both the Political and the Legal Committees emphasized in their comments, how-
ever, that free exchange of information should not be interpreted to mean
that broadcasts would be handled like merchandise: aside from regulations
concerning advertising, a standardizing European broadcasting code should

also contain regulations protecting young people and safeguarding cultural diversity.

The Commission, which welcomed the resolution adopted by the Parliament, considers the present moment—where the establishment of efficient satellite and cable communication systems is technically feasible and where there is a growing need for communitywide information on political, cultural, economic and social affairs—to be especially opportune for creating the legal conditions necessary for a satisfactory development of transnational broadcasting. The Commission holds that quick implementation of a unified European broadcasting system based on a solid legal foundation will serve to encourage investment in the infrastructure and in the program industry and thus is likely to ward off the risk that the new technical systems may be used only in the traditional national framework, with the traditional broadcasting structures thus being merely reproduced.

Nevertheless, the Commission feels that the differences among the states in regard to broadcasting organization and the sensitive nature of broadcasting work call for a gradual approach dispensing for the present with regulations concerning access to broadcasting work (establishment of a station) and program content (program control). To the Commission, a gradual approach means first of all correct interpretation and observance of the EEC Treaty regulations, above all Article 59 and Article 62, which are concerned with free exchange of services (according to prevailing opinion this includes free transmission of radio broadcasts), and thus elimination of all restrictions of transnational broadcasting, regardless of whether these restrictions are based on discrimination or on other considerations.

Furthermore, gradual approach means elimination of the national legal obstacles impeding transnational broadcasting among the member states, i.e. elimination of exceptions to the free traffic of merchandise and services (allowed by the EEC Treaty (Article 66 and Article 56, Paragraph 1) and by the European Court rulings in the Coditel and Debauve cases (62/79 and 52/79)) such as measures concerning protection of young people, measures restricting advertising in member state broadcasts transmitted in the receiving state, and restrictive measures based on the special nature of copyright law.

Before the Commission submits to the EC Council proposals concerning legal regulations (Article 100), it wants to put up for discussion in interested circles the suggestions substantiated in its Green Book, which call for coordination of several provisions of the national laws on radio and television advertising, coordination of certain national broadcasting regulations concerning protection of young people, and limited coordination of the member states' copyright regulations.

A major obstacle to transnational broadcasting within the community are the divergent, partly contradictory national regulations on radio advertising, which according to the rulings of the European Court may also be applied to foreign broadcasts transmitted to domestic audiences. To ensure communitywide standardization of the advertising regulations, the Commission advocates a guideline (in accordance with Article 57, Paragraph 2, 66 of the EEC Treaty)

stipulating minimum requirements, observance of which is to ensure transmission of a broadcast within a community.

Although such a guideline would in principle have to allow radio advertising, it would also have to ensure--by means of minimum standards and appropriate restriction of broadcasting time--that the benefits of advertising (additional income of the radio networks, product information and increased interest in merchandise) outweigh the drawbacks, e.g. negative effects on family life. One would always have to allow radio advertising by enterprises that are structured--totally or partially--along commercial lines, whereas for state-financed enterprises advertising could be prohibited so as to make allowance for the noncommercial tradition of broadcasting in some states.

In allocating the maximum permissible advertising time, the Commission proceeded from the assumption that excessive restrictions would cause a disequilibrium of supply and demand and thus overly high prices that would place smaller enterprises at a disadvantage vis-a-vis their well-funded competitors. Moreover, a restriction of advertising times would be liable to hamper introduction of new products. These effects would become aggravated if--as is to be expected--as a result of the establishment of new broadcasting enterprises the viewing figures for the individual broadcasts decreased without there being any simultaneous extension of the permissible advertising time. Upon consideration of all factors, the Commission recommends--without definitively committing itself, however--that 20 percent of the broadcasting time be allocated to advertising.

Furthermore, the guideline would have to stipulate a clear separation of the commercials from the broadcasting program proper. While sponsored programs as such should not be forbidden, it would be necessary to prohibit exertion of influence by sponsors on the editorial and journalistic decisions of the responsible program planners. For reasons related to public-health policy, the Commission recommends for certain products such as tobacco an absolute prohibition of advertising, while for other products, e.g. spirits, it considers a code of conduct sufficient for eliminating certain negative forms of advertising. Observance of the advertising regulations--regardless of whether they are standardized in the guideline itself or laid down in a code of conduct--would have to be checked by control organs to be established in every member state. Besides, according to the proposals presented by the Commission, the member states are free to apply stricter standards to first broadcasts of commercials within their sovereign territory; this must not interfere, however, with transnational advertising broadcasts conforming with community regulations.

Like the advertising regulations of the individual states, the states' youth protection regulations are apt to interfere with transnational broadcasting, for like the advertising regulations they represent a public-interest-oriented arrangement that in accordance with Article 56, Paragraph 1 of the EEC Treaty permits restrictions of the free exchange of services. The Commission wants even a standardized European broadcasting market to be subject to youth protection laws, especially since a greater number of programs, and of television programs in particular, is likely to exert a strong influence on young

people's intellectual development. In terms of legislation, the Commission again proposes a guideline setting minimum standards, e.g. prohibition of broadcasts, above all broadcasts conveying hard pornography, violence or racism, that could interfere with the physical, intellectual and moral development of children or young people. As in the case of advertising, observance of these regulations on the national level would have to be ensured through some kind of self-control, e.g. self-control within the broadcasting enterprises.

Differences among the community's individual states exist also in regard to the protection of the right to privacy. Although the citizen's right to counterrepresentation and correction does not restrict transnational broadcasting or impair the competition among the broadcasting enterprises, the Commission recommends uniform regulations concerning the right of counterrepresentation, in order to better protect the individual citizen against the inroads of transnational broadcasting. However, the Commission will make a final decision on this matter only after extensive discussion with the circles concerned.

In accordance with community law, the author's dissemination right extends only to his work being disseminated with his consent in any EC country; the right to nonphysical reproduction, however, may even within the community be subject to territorial restriction, and this is what is generally practiced. In such cases, broadcasting or continued broadcasting of the work is permissible only if the broadcasting enterprise has obtained a territorial use permit from the author. Although the states' copyright regulations are effective only within the sovereign territory of the states concerned, international copyright law grants the author broadcasting rights throughout the community, beyond the borders of his homeland, because all EC states acceded to the Revised Berne Accord. In this agreement, the treaty partners pledged to grant all community authors national status and also certain minimum rights, including the broadcasting right. With certain qualifications, these rules apply also to the international law pertaining to those entitled to performance protection; not all of the Common Market states, however, acceded to the 1961 Rome Convention on performance protection--applying to performing artists, sound equipment producers and broadcasting enterprises.

This legal situation complicates realization of transnational radio and television broadcasts, because authors and persons entitled to performance protection may with reference to the copyright law of the respective country sue for injunctions and damages against all those broadcasts for which they did not grant a territorial use permit. A solution to the problem can be derived neither from the directly applicable EC law nor from a standardization of an expiration of the broadcasting right resulting from the first lawful broadcast, because this would be an unacceptable noncompensating expropriation of the holders of the right.

According to the Commission, a contractual solution would be impracticable. It feels that since so many of the people involved in radio or television broadcasts hold rights, the cable broadcasting enterprise normally is unable in time to acquire all necessary rights before the transmission of the

broadcast; even though the requisite broadcasting rights can frequently be acquired from primary stations ready to come to terms or from commercialization enterprises, one must allow for the possibility that transnational broadcasting may be hampered by occasional vetoes of holders of rights who either could not be located or were not prepared to enter into an agreement.

This conflict could be obviated in the following way: The author would retain his right to sue for discontinuance, but he would be obligated to have his rights protected by a commercialization enterprise. The broadcasting enterprises would have to come to terms with the authors before the broadcast, however. Another way of solving the conflict would be through introduction of a legal license to reduce the author's right of prohibition to a compensation claim so that broadcasts could be continued even without the permission of the author or the person entitled to performance protection. The only payment required then—after the event—would be an adequate compensation.

To render protracted, uncertain contract negotiations unnecessary, the Commission—assuming continued broadcasts are unchanged and simultaneous—gives preference to the legal license. It proposes a regulation obligating the member states within a certain time limit to revise their copyright laws accordingly; disputes about what is adequate would be settled by an arbitration board having jurisdiction over the entire European Community. The foundation has now been laid for a productive discussion with the circles concerned. Exactly what proposals the Commission will submit to the Council depends on the outcome of this discussion.

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BRIEFS

SWEDEN PARTICIPATES IN ERS-1--On 30 August, the Swedish government decided
to make a contribution of SKr 118 million (same amount in French francs) to
the development of the European oceanographic observation satellite, ERS-1.
The satellite is scheduled to be launched in 1989 by an Ariane rocket. At the
Kiruna observatory, in Lapland, special equipment will be installed to re-
ceive and interpret the photographs transmitted by ERS-1, which should make
it possible to improve the development of marine and submarine resources.
[Text] [Paris AFP SCIENCES in French 6 Sep 84 p 24] 9294

ARIANE TO LAUNCH AUSTRALIAN SATELLITE--Australia has decided to sign with
the European consortium Arianespace a contract worth close to U.S.$ 20 mil-
lion for the launching of its third satellite, it was announced on 11 October
in Canberra by the Australian minister of communications, Mr Michael Duffy.
The domestic telecommunications satellite built by the Australian national
company Aussat is scheduled to be launched in 1986 by a three-stage Ariane-111
rocket. The other two Australian satellites will be launched by the U.S. space
shuttle in July and October 1985. The agreement with Arianespace provides that
orders amounting to some U.S.$15 million will be placed with the Australian
industry; in particular, presses and molds for steels and aluminum to be used
on the Ariane launcher family will be manufactured in Australia. Arianespace
also agreed to technology transfers to Australian industries in the space sec-
tor. Finally, the European consortium agreed to place orders worth about
U.S.$7.05 million in Australia for localization and telemetry systems. [Text]
[Paris AFP SCIENCES in French 11 Oct 84 p 23] 9294

CSO: 5500/2519

CNET MAKES ECL SWITCH USING METALLO-ORGANIC CVD

Paris ELECTRONIQUE ACTUALITES in French 12 Oct 84 p 30

[Article: "The Bagneux CNET Has Made a Four-Transistor Reversing Switch
With a Propagation Time of 300 ps"]

[Excerpt] Researchers at the Bagneux lab of the
CNET [National Center for Telecommunication Studies]
have completed an ECL [emitter-coupled logic] revers-
ing swith in double-heterojunction bipolar GaAs
technology (TBDH); the switch has an output stage
which, in normal operation, has a current gain of 60
and emitter-base and base-collector capacities of
0.15 pF (static test).

The reversing switch was obtained in "mesa" technology with a 4-μm line
dimension, by integrating on a semi-insulating substrate four bipolar
transistors with double GaAs-GaAlAs heterojunctions (obtained by vapor-
phase epitaxy with organo-metallic cracking, MO-CVD [metal oxide-
chemical vapor deposition]) and four resistors (obtained either from a
semiconductor strip or from a layer). A more accurate typing of this
reversing switch is currently being prepared. In the present state of
technology, and taking into account low-frequency measurements and simula-
tion results, the propagation time should be 300 ps/gate and consumption
1 mW/gate. These results, plus the simplicity of the fabrication process
used (five masking levels), should soon open new applications for this type
of circuits in the field of telecommunications.

Still with the same TBDH technology, the Bagneux CNET also developed a mono-
lithic photoreceiver for optical transmissions on multimode fibers at 0.85 μm;
it consists of a preamplifier based on an heterojunction bipolar transistor
and a bipolar double input heterojunction phototransistor (which was also
patented by the CNET in 1980).

The photoreceiver should be characterized by a sensitivity of -40 dBm at
140 Mbits/s, a passband of 300 MHz and a minimum detectable power of 100 mW.
In the same order of ideas, we should mention that the Japanse company Oki
has developed a bipolar GaAs-GaAlAs transistor with photoemission, amplifi-
cation and photoreception functions. This component has already been used

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in an integrated optical multivibrator that should be marketed in the next two to three years.

16 ps With Rules of 2 μm

The ECL GaAs heterojunction technology developed at the CNET is characterized by the fact that it reconciles speed and a reduced consumption with respect to silicon ECL logic (with drawing rules of 2 μm, the merit factor should reach 7075 for a propagation time of 16 ps per gate). Such a performance cannot be obtained with silicon bipolar integrated circuits, and must use submicron technologies for GaAs FET [field-effect-transistor]or heterojunction TEGFET [two-dimensional electron-gas FET] integrated circuits. Therefore, after acquiring additional technological means, the CNET is now going to research the implementation of 2-μm rules in connection with the realization of low-complexity logic integrated circuits; the adaptation of the ECL reversing switch to more complex circuits (ring oscillator, divider by 2 at 8 GHz); and the realization of analog integrated circuits (power microwaves and high-speed digital/analog converters). We should bear in mind that the objective of the CNET is to demonstrate the technological feasibility of more complex circuits and to set up complete technological processes for industrial transfer.

The CNET is using growth methods involving molecular-jet epitaxy and vapor-phase epitaxy with organo-metallic cracking.

The epitaxial structure of heterojunction bipolar transistors is similar to that of semiconductor lasers and makes it possible to consider integrating a laser and a control circuit on a single substrate. This was the subject of an offer submitted to the EEC by GEC [General Electrodynamics Corporation], STL [expansion unknown], Telefunken Electronic, the CNET and three other companies, in the context of the ESPRIT program [European Strategic Program of Research and Development in Information Technology] (as is known, as far as GaAs technology is concerned, the three themes selectec by ESPRIT in III-V microelectronics are GaAs FET, TEGFET and micro-optoelectronics).

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